

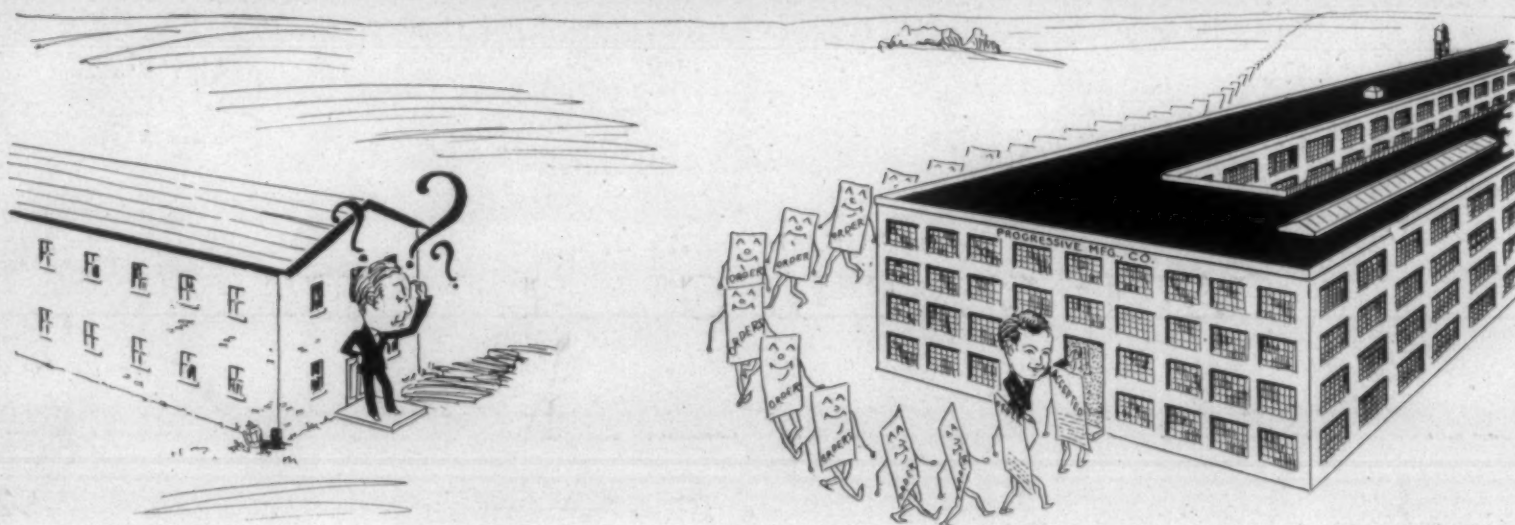
SOUTHERN TEXTILE BULLETIN

VOL. 34

CHARLOTTE, N. C., THURSDAY, JULY 5, 1928

NUMBER 19

This "Wet and Dry" Question Bothers The Manufacturer Too!



"How Dry I Am"—

Bahnson Humidifiers will help you keep pace with the demand for improved quality at low manufacturing costs.

The Bahnson is not a cheaply constructed humidifier made to sell for the lowest possible price. Extreme accuracy and ruggedness are built in each Bahnson Humidifier, as well as lasting endurance. It is made of the best grade of copper, brass and steel the market affords for the purpose. Even the steel parts are *Parkerized* to insure against rust.

The Bahnson Humidifier is designed to put moisture into the air in the right amount at the right time in the right place, and it *automatically* does the work for which it is designed.

The maintenance and operating costs on a Bahnson System are lower than for any other system of claimed similarity on the market.

We invite a comparison of Bahnson equipment with any other you may consider.

THE BAHNSON COMPANY

HUMIDIFICATION ENGINEERS

Winston-Salem, N. C.

New York Office: 93 Worth Street

Incorporated 1911
CHARLOTTE MANUFACTURING COMPANY
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Sixty-one Years Experience

In Manufacturing

Card Clothing

We are at all times alive to any new developments not only in raw materials but also in the manufacturing of our finished product. Once we can prove any change to be of distinct advantage to you, you will find us using it.

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Manufacturing Company

ESTABLISHED 1866

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Branches:

Atlanta, Ga., (Factory)

Philadelphia, Pa.



The often intangible "something" that makes one article sell more than another is not so intangible when analyzed. Be your product underwear, hosiery or what, if put side by side with a competing equal priced article, the buyer will choose between them.

Naturally each article may have certain features, each appealing to a class of buyers and selling those certain buyers. However, there is an underlying foundation for choice which influences not just one class, but all buying classes—and the yarn in your product exerts a part of this influence.

American Yarns give your product a quality foundation to start with. That means sales influence when on the counter with other merchandise.

Supervising this selection of cotton, the spinning, and the mercerizing is an organization long experienced in producing huge quantities of yarn, all of it exactly uniform and all with the same beautiful lustre.

It is not remarkable that American Yarns have made so great a success—for their users have profited through them.



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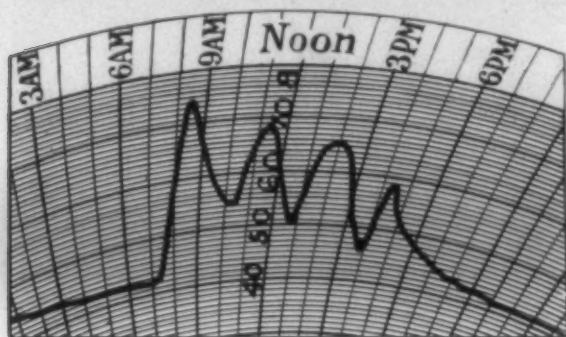
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The Economy of Adequate Humidification

ParkSpray Humidification Means Money for You



Humidity cannot be stabilized by hand operation

The Psychrostat is the Stabilizer

Of course you can regulate your humidifiers by hand. Nobody said you couldn't.

But before you know that they need regulating either one of two things will be obvious; either the work itself or the help will protest—or somebody will have to run around taking sling psychrometer readings.

If you regulate by hand and you can if you think you can afford it, you will get a chart something like the one at the top of this column. It's pretty good—for a hand regulated job. The average relative humidity was about 60 per cent.

But it wasn't uniform and with nature changing as it does, it keeps one on the hot foot. Doesn't improve production!

And you are in the textile business—not a weather observer.

Now what can uniform, stabilized, scientific, well balanced, regulated humidification do for you? What is good running—fewer ends down—worth?

A test in one mill showed 3.8 ends down per hundred spindles per hour under regulated humidifiers; but another room in the same mill on the same goods without regulators

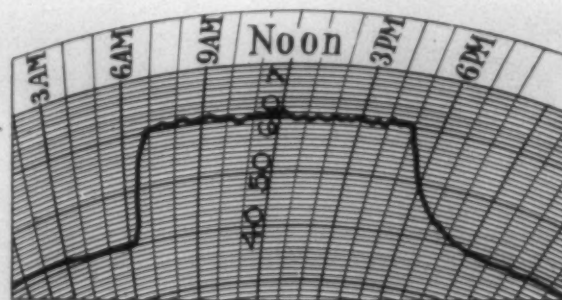
had from 5 to 8 ends down per hundred spindles per hour.

In a mill making 20s to 60s combed and carded yarns, with automatic regulation throughout the mill, a three months' test showed counts that never varied more than $1\frac{1}{2}\%$ above or below the required number.

Regulated humidity simplifies the regain adjustment problem. Yarn will not be too damp one day and too dry the next. While this is essential for the yarn mill it is also important to the cloth mill. A variation in regain requires a variation in cotton content for even counts. It is far cheaper to put automatic regulators on the humidifiers than to change gearing on spinning frames several times per week.

And so for all the economy there is in adequate humidification, there are finally but three things: evaporation, air change and balance. But the greatest of these is balance.

You run a textile plant. Give all your thought to production by getting ParkSpray humidification and the Psychrostat.



Humidity stabilized by automatic regulation

Parks-Cramer Company

Engineers & Contractors
Industrial Piping and Air Conditioning
Fitchburg Boston Charlotte

Canadian Agents, W. J. Westaway Company, Ltd.
Hamilton, Ontario, Montreal, Quebec.

Adequate Humidity means adequate capacity. Capacity means gallons.

In gallons of water evaporated, ParkSpray equipment is the lowest in price.

Read These Facts by Mill Superintendents Which Prove the Value of **SKF** Roller Bearing Spindles

"THE longer I have them the better I like them," states the Superintendent of a large New England mill in which **SKF** Roller Bearing Spindles are used. Comparative tests made on four 256 spindle spinning frames, before and after equipping with **SKF**, showed that 20.3 per cent less power is required to operate the four frames when equipped with **SKF** Roller Bearing Spindles.

But, of perhaps greater importance is the fact that the main advantages of **SKF** Roller Bearing Spindles are discovered by the mill man in his own installation. In another New England Mill, the Superintendent put **SKF** Spindles on the hardest job he had—spinning No. 70 yarns for filling. Previously to installing **SKF**, when atmospheric conditions were poor, it would be necessary to have extra spinners on the frames to keep the ends tied up. With **SKF** this condition has not presented itself—no matter what the weather.

ADVANTAGES OF THE **SKF** ROLLER BEARING SPINDLE BOLSTER

Power input per frame reduced by 15 to 35 per cent.

Oiling reduced to a once-a-year detail. In one mill **SKF** Roller Bearing Spindles have been run-

ning for two years with oil chambers sealed.

More uniform twist—less ends down.

SKF Roller Bearing Spindles can be secured from all manufacturers of cotton spinning frames.

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40 East 34th Street
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SKF

Ball Bearings



Roller Bearings

The Viscose Company,

*makers of all Crown branded rayon yarn,
owns and operates these five factories*

Fifteen thousand people are employed by The Viscose Company

These plants occupy eighty-two acres of floor space

Their production is over fifty million pounds of rayon per year

The Viscose Company is the world's largest producer of rayon yarn

As THE world's largest producer of rayon yarn, The Viscose Company owns and operates five extensive plants. At Marcus Hook, Pennsylvania, is the original factory, opened in 1911, when this concern brought the rayon business to America. CROWN rayon yarn is also made at the mills located in Lewistown, Pennsylvania; Parkersburg, West Virginia; and Roanoke, Virginia. At Nitro, West Virginia, The Viscose Company operates its own pulp plant.

Doing business on such a huge scale guarantees continuous and result-producing research. The Viscose Company has already contributed greatly to the growth and expansion of the rayon

industry. But success has not brought complacency. With unremitting effort, we co-operate with our customers in the interest of technical advance and sales progress. Our offices in leading textile centers facilitate such service. For the further protection of our customers, we brand our output of rayon yarn, CROWN. This trade-mark signifies yarn spun true to denier. Yarn that dyes evenly, washes without harm, irons without damage to its lustre. Because of its certain excellence, converters, manufacturers and retailers specify it with assurance of merit. Direct inquiries to The Viscose Company, 171 Madison Avenue, New York City. *World's largest producer of rayon yarn.*

Original plant, opened 1911, at Marcus Hook, Pa.



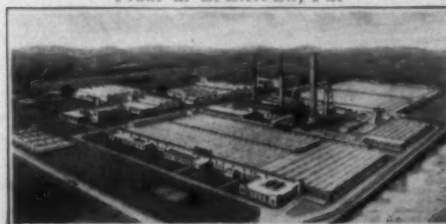
Pulp Plant at Nitro, W. Va.



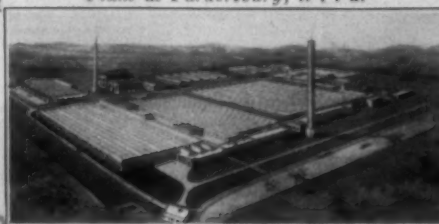
Plant at Roanoke, Va.



Plant at Lewistown, Pa.



Plant at Parkersburg, W. Va.



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NUMBER 19

The Labor Extension System

THE following address on the labor extension system of operating cotton mills (commonly called the multiple loom system) was made by J. M. Barnes, of the Barnes Textile Service, Boston, at a meeting in New Bedford, Mass., of the New Bedford Textile Council:

In the first place I would like to request the cooperation of the press in helping me to correct the name or title which has been given to the methods which we have been instrumental in working out for the textile industry. I refer to the so-called "multiple loom system" which I maintain fails to convey a true picture to the minds of those connected with the industry, and I know very well from experience, fails utterly to enlighten the community at large.

As we all know, multiple simply means more than one, and in my 22 years intimate contact with the cotton textile industry, weavers have always operated more than one loom each. It seems to me that the best way to do away with a misleading term or expression is for all of us to cease using it in our discussions.

I prefer to define the changes, which we have been assisting various textile manufacturers to put into effect, as a division and rearrangement of the duties of operatives, based upon careful analysis of existing conditions. In general, the duties as performed by an individual operative under the old plan may be split into three divisions, as follows:

Operatives' Duties Classified.

1—Duties, the performance of which require considerable training and a definite amount of natural skill.

2—Duties which require a shorter period of training, and which may be described as semi-skilled.

3—Duties which can be performed by operatives with practically no training in mill work.

By taking away from the expert operative those duties which come under headings two and three, it can be readily seen that she can do only the skilled work on more machines at higher wages, and all the other duties can be performed by others with pay in proportion to the requisite skill.

This is nothing more or less than putting into effect the methods which are proving successful in

other industries. Years ago, lathes, drill presses, planers, etc., in machine shops were operated by journeymen machinists. Today, the skilled mechanics grind the tools and set up the machines for any particular job and the actual operation of a battery of machines is turned over to lower paid men who have not yet acquired the skill and experience of first class mechanics. Ambitious operators ultimately graduate to the better jobs. This method has helped to make the automotive industry prosperous for the management as well as for the workers.

By adopting this method in our mills, it affords a natural and definite means of promotion, based upon the aptitude and ambition of the individual himself.

Limiting Factors Have to be Studied

In the theory, the division of labor and extension of jobs is simplicity itself, but in practice, it is most difficult. There are numerous limiting factors which have to be studied and compiled for each size of yarn and each style of cloth in every individual mill.

Some of the factors which have to be taken into consideration are as follows:

Stock from which the yarns are spun.

Turns of twist per inch necessary to produce the desired finish.

Lay out and arrangement of machinery.

Condition and adjustment of equipment.

Means of controlling humidity.

Speed of machines.

Skill and experience of the individual operatives.

In conferences, the operatives often ask me the question as to how they can be assured that the management will not extend the jobs beyond the limit. This is easily answered because it is nothing short of suicidal for a mill executive to give a weaver more looms than he can operate efficiently, provided that the weaver pursues his task diligently. The item of overhead expense is higher per loom than the weaver's wages so that the object of lowering the cost of production would be defeated at the outset, and the large investment per loom obligates the management to maintain a high standard of production.

Making Changes in Weave Room

The ordinary weaver, especially on automatic looms, spends a high proportion of his time on unskilled work. We believe that this condition is wrong and in many mills we have been instrumental in correcting it.

Careful time study reveals two important factors in determining what changes can be made to correct present conditions:

1—What percentage of the weaver's time is employed doing actual weaving. By weaving, we mean piecing up warp ends and starting looms.

2—What causes the loom to stop. Our studies reveal the basic causes for loom stoppage, whether it be the warp, filling, or mechanical troubles. Some of these causes can be practically eliminated, resulting in higher percentage of production and better quality cloth, as well as lower costs.

Better running work, that is, less loom stoppage, naturally means that the weaver can run more looms. However, take away all battery work and any other labor which is not strictly weaving and the weaver can run still more looms. Our time studies give us the necessary data to determine just what a weaver's job shall be, as well as how the other work taken away from the weaver shall be handled.

Who benefits from such a change?

In the first place, the mill gains because the higher paid hands do the skilled work on a greater number of looms, while the other work is done by younger, less experienced people at lower pay.

The Weavers Benefit

In the second place, the weavers benefit because the mill can afford to pay better wages to weavers doing only the weaving on his set of looms. If a weaver is sweeping, filling batteries, cleaning, or oiling, he is not weaving. If a loom stops while the weaver is performing any of these duties, it means that the weaver's pay from that loom stops. If all of this other work is done by somebody else, the weaver can then concentrate on the job of keeping his set of looms running which, of course, will give the weaver more pay at the end of the week. The less experienced workers who do the battery work, etc., are given an opportunity to become familiar with weaving. These operatives advance

to the weaving jobs as fast as they become proficient and there are vacancies ahead.

The results obtained in a number of weave rooms where these ideas have been in operation for a reasonable length of time are most gratifying. Lower costs as well as better paid and more satisfied help have followed such reorganizations.

In the Spinning Room.

No doubt you would all like to know how an engineer would proceed to put into operation the division and rearrangements of duties. For the purpose of illustration, let us select a spinning room. The first thing he does is to make a diagram of the room showing the layout of the frames and physical condition, the count of yarn on each, the hank roving, the kind of stock, size of roving bobbins, turns of twist, speed of spindle, speed of front roll, roll settings, diameter of rings, traveler in use, size of bobbin, frequency of doff, and many other details, all of which have a direct bearing on the problem which he has to solve. He then starts a man to making time studies which will reveal how many ends have to be pieced up per thousand and spindles per hour, how many roving bobbins have to be creel'd in per hour, and the time it takes a spinner to perform the various cleaning operations which are necessary to make the work run well and produce the desired quality of yarn.

By experience and the completed studies the engineer knows how long it takes to piece up an end and how long it takes to creel a roving bobbin on each kind of work. With this data in hand he computes the proper sized job for a skilled spinner. He then splits the remaining duties formerly performed by the spinner among semi-skilled and unskilled operatives, and builds up the proper sized jobs based upon the time required to complete each individual operation.

Benefits of the Plan.

In this way, the mill is benefited by having all its piecings made by the most adept workers who, in turn are freed from doing that part of the work which can be done just as well by others not possessing so high a degree of skill. This gives the experienced worker a just cause for pride in her craft and the be-

(Continued on Page 35)

Handling Rayon Yarns*

By Harold H. Phillips

THE first and most important point in winding rayon is the laying of skeins on the swifts. It is necessary to determine the inside and outside of a skein. This is done by spreading it across both hands, your fingers pointing away from you, until it is flat both widthway and lengthway. If both inside and outside are tight and flat, you have it right side out, or, in other words, just the way it left the reeling machine. If, however, the inside is loose, and the outside tight, reverse it by turning it inside out.

On Swift as on Reel.

With the inside and outside of a skein determined, the next step is to lay it on the swift and find the end. The skein should be laid on the swift in the same relative position it was made up on the reel—that is, outside on the reel should be outside on the swift. The skein should lie on the swift spread out evenly widthway as far as the swifts will allow and the swift bands should be equal distances from the swift-axis. Rayon is reeled with a cross-wind and is laced with four tie-bands, to one of which the ends are tied.

Remove the tie-bands by cutting them on the edge away from the knot; the tie-band to which the ends are fastened being the last one out. The end for winding is the one running on the outside of the skein. Cutting them on the edge away from the knot will allow them to be pulled out easily without disturbing the lay of the yarn. Do not break the tie-bands, as this has a tendency to break and split the filaments. Do not straighten skeins by beating on a shaker-pole, as this does not straighten the yarn but damages it. It is very important that the operator be instructed to straighten skeins on hands as noted above.

Winding Machine.

The process for winding from the skeins to the bobbin is performed on a machine similar to that used for winding natural silk. The machine is of light construction and the speed is regulated to insure maximum production with a minimum amount of stretching or breaking of the yarn, thus producing good work. The shaft of the winding-machine should run at about 105 revolutions per minute, which gives an average thread-speed from the shaft of 63 yards per minute. At this speed an average operator will wind 80 pounds of 150 denier per nine-hour day on 68 spindles.

The traverse should have porcelain guides that are perfectly smooth and which should be inspected at least three times a year as they become worn or cut from the constant friction of the yarn. It is essential that the guides be perfectly smooth so as to prevent the filaments from being broken. When yarn breaks during the winding operation and it becomes necessary to tie a knot, the operators should be instructed to tie all flat or weaver's knots.

The weight and size of bobbin

used for the winding of rayon and the weighting of the swift are of great importance. Bobbins suitable for yarns ranging from 100 denier to 150 denier should not be over three ounces in weight and should conform to the following dimensions:

Overall, $3\frac{1}{2}$ inches.

Inside of flanges, $2\frac{1}{2}$ inches.

Diameter of flanges, $2\frac{1}{2}$ inches.

Diameter of barrel, $1\frac{1}{2}$ inches.

The weighting for the swift should not be over six/seven ounces.

Coning from these bobbins is an easy operation, but care should be taken not to have too much tension, thereby stretching the yarn, and all knots should be weaver's knots and tied on the top of the cone to prevent thread catching on the knot and causing a press-off or hole in the fabric when being knitted. Spindle speed should be about 1,100 r.p.m. At this speed an average operator will wind about 75 pounds per nine-hour day on three machines of 18 spindles.

Most hosiery and knitted cloth manufacturers are equipped to do their own winding on bottle bobbins direct from the skein. There seems to be a preference for knitting from bottle bobbins rather than from paper cones. Also the cost of this one-operation winding is considerably lower than first winding on a bobbin and transferring to a cone. An average operator will wind from 50 to 60 pounds per day on bottle bobbins, making the labor cost from five to eight cents per pound, depending, of course, upon the wages paid in different localities.

Copping or Quilling.

Owing to the stretch and uneven tension caused by the variation of the swift, it is not advisable to run the thread direct from the skein to the cop. To obtain the best results, it is essential to run the thread from a bobbin wound on a winding machine and then on a quiller to run from the bobbin to the quill or cop. The type of quills used for quilling rayon is the same as is used for quilling natural silk. The quilling machines are equipped with compensators to regulate the tension on the yarn as it passes from the bobbin to the quill or cop. All the points of contact should be smooth and should revolve (fiber or wooden wheels being used), thus eliminating the friction that would be caused otherwise. Rayon is subjected to a severe strain while being quilled and extreme care should be taken as to the uniformity of tension on each spindle. The spindle must be perfectly true, as any variation has a tendency to bruise or discolor the material where it comes into contact with the builder. Uneven tension or strain upon the yarn will cause it to stretch, thus producing tight or bright picks, sometimes called shiny picks, in the woven cloth. Knots should be laid on the surface of the quill, not in the tra-

verse, so that, during the process of weaving the thread will draw freely from the quill. This is essential because any obstruction on the quill during weaving also causes tight and bright picks.

The wind most suitable for rayon is the seven-wind, which can be produced on a natural silk quiller. The speed of the machine should be regulated so that the spindle runs about 1,500 revolutions per minute.

The length of cop or quill should be not more than six inches. Using a cop or quill of this length, a seven-wind and $1\frac{1}{2}$ -inch throw, and building it to $\frac{1}{4}$ -inch diameter, it would hold approximately 1,365 yards of 150 denier yarn. An average operator will wind 60 pounds per nine-hour day on 40 spindles.

Warping.

Rayon, as it is spun, has about two and one-half turns per inch. If the warp ends are not too close, the yarn can be used successfully without treatment of any kind but should the ends be fairly close together, to avoid chafing it is advisable to put extra twist in the yarn, say about four turns, making six and one-half altogether. This extra twist is rather expensive and has the additional disadvantage of making the yarn stiffer; and, owing to the thread being rounder and thus smaller in diameter, it will not cover as well as the flatter or softer twist yarn.

To overcome this a size is used to hold the filaments together while the yarn is being woven, this, of course, preventing chafing. It must be kept in mind that in most cases this size will have to be removed after goods are woven. Therefore something should be used that is comparatively easy to remove, by the following method:

Run through a continuous crabbing machine with plain water at 180 deg. Fah. Where black cotton filling is used, it is advisable to reduce temperature to 160 deg. Fah. Then cloth is run through a flat vacuum extractor to remove excess moisture, dried on a pin dryer and then pressed with very little pressure. Even with this method, should the fabric contain dyed yarns, the colors should be fairly fast to stand this slight washing.

Very few mills are equipped to do machine sizing. Where skein sizing is necessary, the following formula has proven very successful:

To 30 gallons of water at 45 deg. C add 10 pounds of gelatose. To this bath enter the yarn wrapped in bundles of 15 skeins each in cheese-cloth—submerge for 30 minutes—take out and whiz for eight minutes and then spread on rods to dry in regular way in dryer. The size-bath must be reinforced from time to time to keep up its strength.

Machine Sizing Formula.

Machine sizing formula is as follows:

Add 23 pounds glue to 45 gallons

cold water in a 60 gallon barrel and soak for two hours or longer. Boil until thoroughly dissolved.

For white warps the glue solution should stand at 1.003 Sp. Gr. at 45 deg. C. and for colored warps at 1.005 Sp. Gr. at 45 deg. C. Two gallons of water added to the barrel will reduce the specific gravity about one point.

For white warps dissolve three ounces of plastic cocoanut oil soap in three gallons of warm glue solution above—for colored warps dissolve $2\frac{1}{2}$ ounces of cocoanut oil soap. Then the sizing is ready for use and may be poured into the trough of the machine. Keep temperature 120 deg. Fah. in trough.

As high as 215 ends per inch on 150 denier can be woven successfully if yarn is properly sized.

If rayon is stretched in winding or warping, the threads stretched will eventually come back to their original length. If the weave is sufficiently close to hold the stretched unusual brilliancy or so-called "shiner." If the weave is loose and the thread is allowed to come back, the goods will pucker. This is more likely to occur in rayon-filling and where filling is used in draperies will show more than in the warp, as the stretched thread in warp will hang lengthwise and be more or less covered up in the folds. To avoid this stretching, every care should be used in winding from skein to the spool to avoid unusual tension, and where it is used for filling additional care should be exercised in the quilling.

During the summer months when the percentage of relative humidity is high, this trouble will be exaggerated as excess humidity or moisture will allow the yarn to stretch more where the tension is not properly controlled. To get the best results, 50 per cent relative humidity in winding, warping and weaving is advisable the year around. However, in the summer months, natural relative humidity in some localities will run as high as 85 per cent. To control the humidity or keep it down to 50 per cent, a dehumidifying system is necessary. As this system is very expensive and therefore not practical for some of the smaller mills, the trouble can partially be overcome by watching all tensions in winding and warping, keeping them at a minimum.

Knitting.

A very few years ago it was necessary to use from 5 to 15 per cent of oil where rayon was knitted on hosiery machines or on body machines, the latter cloth being used mostly for underwear. This was necessary for softness as well as lubrication. Today rayon is so much softer that a number of concerns, particularly underwear cloth manufacturers, are using no oil on the yarn but humidifying their winding and knitting rooms during the time of year when artificial heat is used in the mill. This heat will bring the relative humidity as low as 20 per

(Continued on Page 32)

*Paper presented at Alumni Meeting at Philadelphia Textile School.



When the **BLIND MAN'S BLUFF IS CALLED**

IN hundreds of neat little offices decorated with highly moral mottoes, textile salesmen and shrewd buyers daily determine what the well-dressed woman will wear—and how long it will wear. If the subject of color fastness is mentioned at all the word "guarantee" is frequently tossed out with a knowing look.

Down the aisles of those same stores surge thousands of women seeking the merchandise that men in the motto-decorated offices have decreed they shall wear. Whether or not these ultimate consumers mention fastness, they naturally expect that no material would be offered for wear unless the colors could stand up under that

wear. The store's reputation is their warranty for this implied guarantee of color fastness.

Upon miles of clotheslines, in thousands of laundries, on hundreds of sun-baked boulevards verdicts are rendered every day for or against the sellers and the makers of these textiles. When implied guarantees are proven worthless, the knowing winks in those motto-laden offices turn to worried frowns.

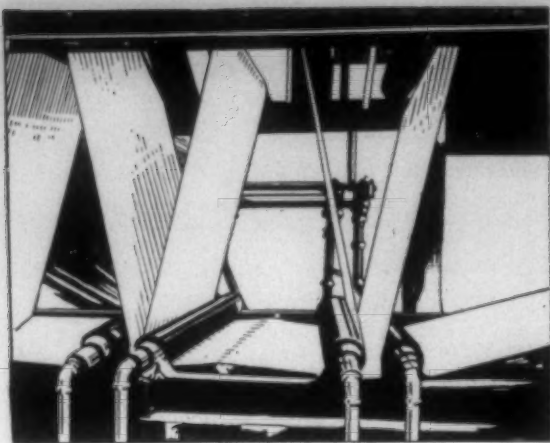
Not the complaints that reach the adjustment department, but the complaints the store never hears build up a reputation for unreliability. After all, none are quite so blind as those textile men who will not see that—



Everybody gets more for their money in

FAST-DYED FABRICS

E. I. DU PONT DE NEMOURS & CO., Inc. Dyestuffs Department WILMINGTON, DELAWARE



No Grease Spots on Your Fabrics

WHEN comb-boxes are worn and their packing no longer is tight, the best way to keep up their efficiency and prevent "throwing" of oil is to use "Standard" Mill Cot Lubricants.

"Standard" Mill Cot Lubricants are specially made to stay put on metal and not to "spatter" away from moving parts and stain the product as it is manufactured.

"Standard" Mill Cot Lubricant is adapted also for the lubrication of all roll necks, cams and loose fitting bearings—and for use on looms.

**"Standard" mill lubricants are safest
and cheapest per mill hour**

"STANDARD" Esso Cylinder Oil	—Steam Cylinders
"STANDARD" Turbine Oil	—Turbines
"STANDARD" Motor Oil	—Automobiles
"STANDARD" Spindle Oil	—Spindles
"STANDARD" Loom Oil	—Looms
"STANDARD" Belt Dressing	—Leather Belts
"STANDARD" Renown Engine Oil	—Electric Motors
"STANDARD" Mill Cot Lubricant D 10	—Comb-boxes

A complete line of oils and greases for automobile lubrication



Whenever a product of petroleum is sold under this emblem you can be sure of its uniformity and high quality.

"STANDARD" Lubricants

Equipment Replacement Policies and Principles

THE replacement of worn and obsolete equipment is one of the most important questions before the textile industry and is receiving a great deal of consideration at this time. The following article, written by John H. Van Deventer, of the McGraw-Hill Company, for the Executive Services Bulletin of the Metropolitan Life Insurance Company, while not dealing directly with textile equipment, gives a great many worthwhile points upon the replacement of equipment.—Editor.

In the average industrial concern, no phase of managerial activity is less defined by policy, or needing it more, than that which has to do with replacement. Ask the manufacturer of industrial equipment and the machinery salesman how much evidence of uniform and definite policy they detect when their customers are considering the problem of scrapping the old machine and putting in a new one. They will tell you quite emphatically that individual judgment and opinion determine most cases, and not adherence to definitely laid down principles and policies.

This is a strange condition, when one comes to think of it. The industrial world has learned to concede the necessity of applying recognized and demonstrated principles to various phases of management. Policies of wide application have become commonly accepted with regard to the establishment and handling of labor relations, the purchasing of raw materials and commodities, cost control and many other specialized functions of industrial management. Books aplenty have been written that set forth the results of experience and accepted practice on such subjects. But helpful literature that tells when to scrap the machine now in use and how to choose its successor is sadly lacking.

This very important matter of replacement, strange to say, is still largely handled by the rule of thumb. Yet it is one of the most important questions that come before the management and the decisions relating to it have a most immediate bearing upon profits in the individual plant as well as the prosperity of the industrial world. Those well informed in industrial economics tell us that our favorable industrial situation, our "American" standard of living, and the large purchasing power of our wages are fundamentally due to the widespread use of improved machinery; the "power factor" of industry, as measured by average horsepower available per worker, has been built up in America to a point far beyond that of any other nation. Instinctly, and without the aid of codified principles or policies, American industry has, by and large, taken kindly to improved machinery and, in return, has been treated most kindly by it.

The most useful and valuable additions to the fund of human knowl-

edge are the outgrowth of just this sort of empirical, or cut-and-try, experience. But maximum progress through the fullest capitalization of such experience is not possible until it has been reduced to basic principles from which sound policies can be shaped for future guidance. It is time that the basic principles of mechanization and replacement in industry should be determined and codified for general use.

In the Interest of Labor.

Significant developments are pointing to this necessity. One of them is the recent extensive propaganda that has been apparent in the daily press, ascribing unemployment to what is termed "our too rapid adoption of improved machinery," and raising once more the age-worn question of the ultimate effect of machinery on human welfare. This propaganda will have little weight with the well informed since it grossly ignores and exaggerates the facts and has an obvious political bias. But the well informed in industrial economics are a very small minority of the great body of newspaper readers. Propaganda of this sort may easily influence the minds of thousands who read it and who accept it without question. Many will thus become convinced that efficiency, the elimination of waste, and improved machinery are actually detrimental to the interests of labor. The disastrous prosperity-retarding effect of this sort of thinking will be apparent to industrial executives.

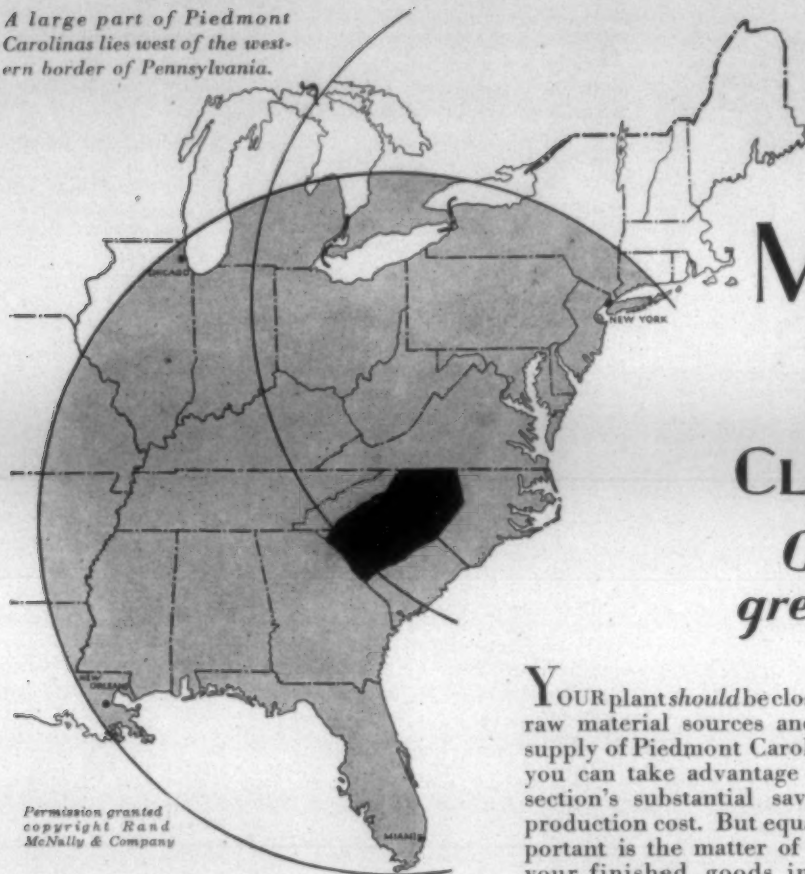
Another reason calling for the codifying of our experience with mechanization is that we may be able to use it effectively to maintain or even improve the high standard of living to which high wages and prosperity have accustomed our people. And there is still room for considerable improvement. For, in spite of the fact that America undoubtedly leads the procession in the effective use of machinery, there is reason to believe that we are just beginning to penetrate the outer edge of its possibilities. Indeed, although we are now using machinery more advantageously than other nations, it is a fact that, aside from a comparatively few leading plants in each field, the equipment in use in American plants is not nearly so good as it could or should be. Careful surveys indicate an astonishing amount of obsolescence. It is safe to say that at least 50 per cent of the equipment in use in American factories today is actually obsolescent and could be replaced profitably.

A Test for the Obsolete

There is but one logical way to determine obsolescence, and that is to compare equipment in use with equipment that is available for the same purpose. If the latter is sufficiently superior from a profit-earning standpoint to make its in-

(Continued on Page 34)

A large part of Piedmont Carolinas lies west of the western border of Pennsylvania.



*A warm welcome awaits you in
Piedmont Carolinas.*

In this hospitable Southern section, neighborliness and the art of living have not been crowded out by congestion and over-building.

Average summer temperature is equal to that of Pennsylvania. The Poconos and Alleghenies have their counterpart in bracing upland sections of the Blue Ridge. Winter averages 20° to 25° warmer. There are 30 to 50 fewer rainy days.

Nearby are the famous Carolina mountain resorts. A few hours over splendid roads take you to Carolina year-round ocean sports. The golf at Aiken, Pinehurst and Southern Pines is world renowned.

Good business and good living go hand in hand in Piedmont Carolinas.

*A Word as to Labor in
Piedmont Carolinas.*

For every man and woman now at work in factories three are still on farms and eager for industrial employment. Sprung from old pioneer stock, 99% native born, the labor of Piedmont Carolinas is keen, intelligent and unusually *productive*. There is a large body of well trained workmen available for highly skilled operations, and a steady supply of untrained help yet to be brought in from the farms.



This book, *Piedmont Carolinas, Where Wealth Awaits You*, tells just what you want to know, *must* know if you are to meet successfully the sharp competition of the near future. Brief. Condensed. Facts that will help you decide, wisely, whether you can utilize the advantages offered here. Send for it, today.

A request to our Industrial Department, Room 716, Mercantile Building, Charlotte, N. C., will receive a prompt and courteous response. Write.

MOVE YOUR FACTORY

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*Give it this 51.1%
greater chance to sell-*

YOUR plant should be close to the raw material sources and labor supply of Piedmont Carolinas so you can take advantage of this section's substantial savings in production cost. But equally important is the matter of getting your finished goods into the hands of buyers.

Being approximately 300 miles closer to the Nation's center of population than the three leading seaports of the North Atlantic states, this section offers a 51.1% greater availability to the country's buying centers.

A 600-mile radius (the economical marketing circle) centered on the heart of that section reaches 44.5% of the total purchasing power of the Union. A similar circle, drawn from Piedmont Carolinas, reaches 66.8% of the country's purchasing power—a market greater by half again.

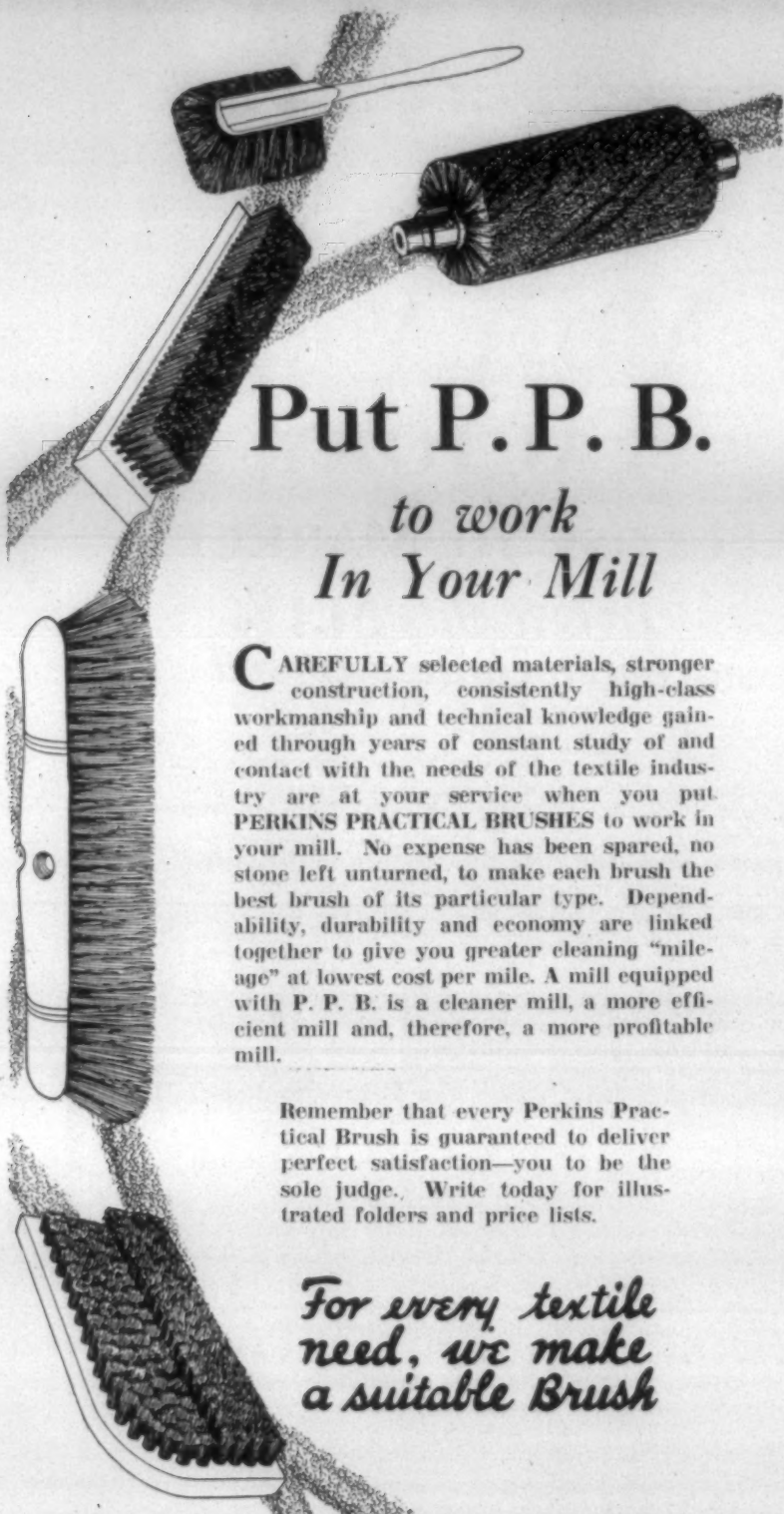
If you can cut your present costs one-tenth to one-quarter, and increase the availability of your goods by one-half, that is a combination that wins and holds markets! That is the combination of advantages open to the manufacturer in Piedmont Carolinas.

Possibly it is what has attracted new plants to this section at the rate of one every four days for the past six months!

*Can You Take Advantage
of These Conditions?*

No one can answer but yourself. In your present location you know what raw materials you use, what wage scales you pay, what your land and buildings cost in overhead. You know whether legislation is favorable or not, whether labor is productive or hampered by restrictions. But *do* you know the facts about these things in Piedmont Carolinas?





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CAREFULLY selected materials, stronger construction, consistently high-class workmanship and technical knowledge gained through years of constant study of and contact with the needs of the textile industry are at your service when you put PERKINS PRACTICAL BRUSHES to work in your mill. No expense has been spared, no stone left unturned, to make each brush the best brush of its particular type. Dependability, durability and economy are linked together to give you greater cleaning "mileage" at lowest cost per mile. A mill equipped with P. P. B. is a cleaner mill, a more efficient mill and, therefore, a more profitable mill.

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need, we make
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Write for Samples
and Prices

Prints, Velvets, Novel Weaves are Favored

American women are selecting gay printed apparel this season and the vogue for colorful prints promises to carry through the coming winter. This was one of the fashion trends brought out in a report issued by the bureau of research and information of the National Retail Dry Goods Association on the style trend of fabrics in 21 States east of the Rocky Mountains. Not only are women favoring prints but they are also showing a great interest in novelty fabrics of unusual texture and weave. The sales of this type of material, which includes the smart silk and wool mixtures, have increased 100 per cent this spring, according to the survey.

Soft shimmering transparent velvets so much favored for party frocks during the past winter are now being widely used for summer topcoats over printed silk dresses, the report states. Incidentally these velvets have come into their own as summer habiliments for the first time because their sheerness makes them porous and cool enough for warm weather. Store buyers are said to be expressing considerable interest in velvets for autumn, from which we may deduce that we are going to have another winter of velvets, both plain and printed.

Sheers Wanted Despite Weather.

In spite of many weeks of cold weather women are buying sheer silks. The sales of printed georgettes and chiffons as well as the less expensive printed rayon voiles are reported to have greatly increased which rather gives the impression women are going to wear dresses of the fluffy, feminine type.

Not only do statistics show that women have been buying these fabrics all spring but the majority of the stores interviewed predicted that printed silks, both crepes and sheers, including georgettes and chiffons, and the semi-sheer cottons such as printed dimity and voiles would be "best sellers" during June, July and August. In the rayon group two-thirds of the stores suggested rayon voiles as being outstanding for summer wear. Organdies also received favorable mention as well as tub silks, especially those of the pongee and shantung weave.

The report refers to the demand for high price merchandise as illustrated by the fact that a year ago the most representative price of printed crepe de chine was \$1.98, as contrasted with \$2.95 a yard during the past winter. Twenty-one per cent of the value of sales of printed silks in the high grade stores during the past winter were made at \$4 per yard. One-half the sales of plain crepe de chine in the same class of stores was made at prices over \$2.50 per yard.

The outstanding findings of the official report are:

"Ninety-five wash goods buyers in 42 cities in 21 States made the following recommendations in response to the query, 'What fabrics

do you think will be "best sellers" during June, July and August?"

Printed Novelties

	P. C.
Semi-sheer cottons	35
Rayon fabrics	34
Sheer cottons	13
Heavy cottons	12
Linen and pique	6

"Of the semi-sheer cottons, printed dimidity is emphasized by one-half the stores. Printed cotton voiles and lawns are also frequently mentioned. In the rayon group, rayon voiles, plain and printed, made from all processes, were suggested by two-thirds of the stores as the outstanding fabrics for summer. Organdies received special mention in the sheer cotton group. Printed linen and pique were other fabrics suggested for June, July and August, 1928.

Fabric Forecast in Silks.

"In response to the question, 'What fabrics do you think will be "best sellers" during June, July and August?' 93 silk buyers in 42 cities in 21 States made the following recommendations, which are given in the order of their importance:

	P. C.
Printed crepes	33
Printed sheers	21
Plain crepes	22
Plain sheers	7
Tub silks	17

"Plain and printed crepes were suggested by 55 per cent of the stores, while the plain and printed sheers were suggested by 28 per cent as leading fabrics for the summer. Printed crepes and sheers, on the other hand, were emphasized by 54 per cent of the stores predicted that plain crepes and sheers would be outstanding fabrics for June, July and August, 1928. Among the printed sheers georgette was favorably mentioned. Tub silk and shantung were emphasized by 16 retail stores.

Classes of Stores.

"Novelty weaves, striped broadcloth, wool mixtures (wool mixed with either silk or rayon), velvets and brocades showed their greatest relative importance in exclusive stores for both the fall and spring periods. Popular price stores led in the value of sales of all black silks, satin faced silks, plain radium, taffeta and rayon containing satins. Sales of plain crepes were most important in average price stores for both periods. During the past spring tub silks were also more important in this group of stores.

According to Population.

"Large cities led in the value of sales of velvets brocades, novelty weaves and printed silks, including crepe de chine, radium, foulard, taffeta and sheers, while in small towns, plain crepes, satin faced fabrics, all black fabrics and rayon satins were outstanding, during the spring and fall.

"In analyzing the trend of sales according to location it was found during the same two periods that

(Continued on Page 32)

The Ink Cook

—has no mean influence on your trademarking matters



A CHEF in the Hotel Ritz Carlton has no greater responsibility than the ink cook in the Kaumagraph factory.

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spurious imitations . . . these inks which are chiefly responsible for the superior quality of Kaumagraph Transfers.

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Can Be Applied to Any Make of Revolving
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The object of this appliance is to remove motes, leaf, short fibres and foreign substances from the cotton before it reaches the Cylinder and Flat Clothing.

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The Cylinder, Doffer and Flat strips taken from a Card which has this Duplex Device applied can be put back into the regular mixing.

This Device has no high speed parts to wear, it is simple in construction and operation, and consequently requires very little attention.

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Uses of Cotton in Transportation

Cotton is used directly and indirectly for more purposes in transportation than any other textile, according to a study just completed by the New Uses Section of the Cotton-Textile Institute, Inc.

Modern transportation, whether by walking, by steamship, railroad, automobile or airplane, requires cotton in some of its many forms. Cotton is combined with other materials in making boots, shoes, rubbers, overshoes, rubber boots and other footwear. It provides the linings of shoes and rubbers; lacings are chiefly of cotton; and certain types of shoes can be made almost completely of cotton.

The picturesque era when the world was carried chiefly in sailing craft has been supplanted by the age of steam and motor transportation but the usefulness of cotton continues in different forms. Today the modern ocean liner in passenger service is a floating hotel. It represents the use of many textiles commonly associated with household requirements such as sheets and bedding, towels, upholstery, draperies and table damask. There are other marine uses for such purposes as boat covers, caulking, collapsible boats, curtains, duck covering, fenders, hatch covers, life preservers and tarpaulins. Cotton duck and canvas have long been a most useful textile in all forms of marine transportation.

The modern railroad requires more than forty different kinds of cotton material ranging all the way from cab tops and curtains to signal cords, lamp wicks, bandages and belting. In addition to these requirements primarily for operation, the service on fully equipped trains calls for other kinds of cotton fabrics very much as the service requirements of ocean liners. It is cotton which helps provide the comforts and much of the convenience in dining cars, sleeping cars and other special equipment.

The automobile industry takes from the cotton textile industry each year very large quantities of cotton fabrics for the manufacture and equipment of automobiles and motor trucks. Indirectly it makes possible the use of other quantities of cotton in the maintenance of these automobiles and trucks, in apparel and accessories adapted to this form of travel and also in the construction and equipment of highways.

It is estimated that the manufacture of automobile tires takes upwards of 500,000 bales of cotton annually in the United States. In addition to its use for tires and tire coverings, cotton is required for the upholstery, curtains and tops of cars, for padding, linings, carpeting, brake bands, gaskets and insulation. Automobile bodies are now made of specially finished cotton fabrics.

There has been such rapid development within recent years as to indicate that here will be another specialized form of transportation in which cotton textiles can be used extensively. Although this industry is in the early phases of its de-

velopment, cotton has been found useful as the fabric for covering the wings and fuselage of certain types of airplanes. It is also used in making parachute packs, summer flying suits, as the basis for rubberized or specially treated fabrics for insulation and tires.

Indirectly cotton has an even greater variety of uses in connection with transportation. From it all kinds of bags and containers can be made for shipping a variety of commodities — cotton, grains, sugar, flour, salt, coffee, rice, soap, starch, etc. The tarpaulins which may be used to cover these commodities and other merchandise are another form of cotton which is useful for many purposes.

Cotton is used in the construction of improved highways as a cleavage fabric between the top surface and the foundation of concrete roads. It has also been found that cotton can be used as a membrane material in resurfacing and improving dirt country highways.

Heavy materials used in waterproofing tunnels and the foundations of bridges are of cotton. Even traffic guides and markers for safety and control of traffic can be made of cotton.

As a raw material and as a manufactured product cotton is one of the principal commodities of the world's trade. It is unique as a commodity that requires extensive transportation and one that is capable of conversion into so many different forms which can help transport and protect other commodities. Cotton is useful in transportation by land, sea and air.

Hosiery Mills Busy

Durham, N. C. — Durham hosiery mills are withstanding the depression fairly satisfactorily, a survey indicates, but the cloth mills are operating only about half time, and apparently finding it difficult to do that. The proposed general shutdown of ten days from June 29 to July 9 will more than likely be observed by all local cloth mills, it is indicated. While the hosiery mills are nearly all operating, executives indicated that prices are very low and profits scarce.

The Durham Hosiery Mills are operating their silk mill day and night. The cotton plant is operating every day but many machines are idle. The Louise Knitting Mill is operating day and night shifts, but not at capacity. The management finds it easier to operate two shifts than to make the necessary changes in the machines in order to keep them all lined up on any one particular job.

The Knitwell is operating day and night at full capacity. This mill has had some slack periods this year but is well booked on orders now. The Seagroves Mill is operating day and night. The Chatham Mill is closed, the only one in the city that is completely shut down. No indication was given as to when the plant could be started again.

Hart Scholarship Fund

This is to announce that the Hart Products Corporation has decided to continue the Scholarship Fund of \$500 which they started last year through the Southern Textile Association.

Any worthy boy or girl, whether high school or college student, is eligible to make application for this fund or any part thereof upon the following basis:

Those interested, whether high school or college students, who wish to receive aid to help enable them to complete their education, shall write a thesis or essay on the "Development of the Textile Industry." This thesis or essay on the development of the textile industry in their particular State is to be the historical development and not the technical development of the industry.

The applicants should give their essays a number, thus leaving off their name; then they should write a letter stating the number they have given their essay; also their particular need for aid; their high school or college record; also statement as to their leadership shown in school and/or college.

This letter should be accompanied by a statement from two or three citizens in the town in which the applicant resides setting forth the character, ability and need of aid of the applicant.

Anyone interested in this scholarship fund should give the matter their immediate attention, as it will be necessary for all essays to be in the hands of the Secretary of the Southern Textile Association, 519 Johnston Building, Charlotte, N. C., by not later than Wednesday, August 15th.

Textiles Are Quiet

Cotton consumed in fifth federal reserve bank district mills in May, 1928, totalled 250,698 bales, of which North Carolina mills used 135,059 bales, the bank summary for June revealed.

South Carolina mills used 106,233 bales and Virginia mills, 9,406.

May consumption in the district exceeded 226,642 bales used in April, 1928.

Consumption in the Carolinas and Virginia totalled 43.4 per cent of the entire national consumption.

No improvement in demand for manufactured cotton goods developed during May and early June, and the mills continued to operate on restricted schedules. In spite of a curtailment of probably 25 to 30 per cent, stock had accumulated in warehouses of many mills, and the mills that moved their products contended that prices were in many cases below replacement value. A number of mills planned to shut down entirely for periods running from ten days to weeks, partly to give employees a vacation and partly to enable the mills to move surplus stocks.

Improved weather conditions in the lower part of the cotton belt and continued slowness in dry goods markets depressed cotton prices between the middle of May and the

middle of June. In the bank review of May, cotton was quoted at 20.82 the pound as the average price paid for middling upland staple in the Carolinas during the week ended May 12, but after that date the price gradually fell to an average of 20.21 cents the pound during the week ended June 16, the latest period for which figures were available.

Sales Largest Since Early May

Sales show an increase over the past few weeks and were the largest since the week of May 11. It was the best week on sheets and pillow cases since last January and the best on fine and fancy goods since April. Total sales were some 20 per cent in excess of full production. Exports again formed a considerable part of the colored good sales, says the Hunter Manufacturing and Commission Company.

A number of circumstances have joined in pushing prices of grey goods upwards; the curtailment coming next week which has given sellers a little more backbone, a little better demand for finished goods, and more important, a rapid and considerable advance in cotton based on bad weather reports.

Although prices have been marked up, they remain three to four cents per pound below the basis of present cotton prices. Some of the large consumers are beginning to wake up to this condition and we have received many bids for large quantities of goods for delivery during the fourth quarter of the year which we think very unwise for the mills to consider. In a few cases, however, we have secured orders at satisfactory prices for September-October delivery. Most of our sales have been confined to spots and July, and we feel it necessary to work very closely with the mills that we represent before committing ourselves too far either in price or delivery.

From the reports that we receive it looks as if practically 90 per cent of the cotton mills in the country would be shut down next week and it may very truly be said that the present situation necessitates not only this curtailment but further curtailment, since it is unthinkable that the industry can go on week after week and month after month, selling goods at less than cost of production. We have an idea that next week's curtailment will be followed by further weeks of shutdown during the summer and autumn, until conditions become more normal.

While complaints come from many quarters concerning the irregularity of business, automobile production did not show the usual seasonal curtailment in May—in fact, it showed an increase over March-April, and May proved to be the fourth highest month on record, while building and construction during that month was extremely active. Building contracts for the thirty-seven Eastern States made a new high monthly record of six hundred and sixty-eight million dollars.

NEW!

Reinforced Heel



Reinforced Slots

THE
JACOBS

Reinforced Roller Cushion (Patents Pending) LUG STRAP

has greater bearing surface on the picker stick—is more heavily constructed throughout—has reinforced heel and slot—wears longer.

This new product of the E. H. Jacobs Manufacturing Company is offered to the weaving trade as a distinct improvement over the Roller Cushion Lug Strap which we invented and which has been so widely used for the past twenty years. It is the result of long study by our Research Department in its effort to provide Loom Supplies of greater efficiency and economy. By strengthening the Strap at its weak points, smashes are reduced to a minimum resulting in greater production per loom.

The Reinforced Roller Cushion Lug Strap is made from the finest materials obtainable, combined with expert workmanship and is always uniform in quality. This Lug Strap is made according to JACOBS specifications for long wear at a low initial cost.

Note the following advantages:

Increased Bearing Surface on Picker Stick: By widening the heel of this Strap, we have provided a larger bearing surface on the stick, resulting in increased wear.

Reinforced Heels: The use of extra-fabric and a new process in reinforcing the heel of the Strap doubles its life.

Reinforced Slots: Tearing of the Strap at the slots has been minimized by extra reinforcement at this point.

Heavier Construction Throughout: The use of more material, coupled with reinforcements have made a Strap of heavier construction.

Longer Life: The Reinforced Roller Cushion Strap will outwear any other Strap of its type, thus reducing smashes and decreasing cost of loom parts.

The JACOBS Reinforced Roller Cushion Lug Strap is sold by your Supply Houses

THE E. H. JACOBS MANUFACTURING CO.

Manufacturers of Textile Loom Necessities since 1869

Danielson,
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Charlotte,
N. C.

Practical Discussions By Practical Men

Lay of Roving on the Bobbins.

Editor:

Can roving be stretched when the roving strands are laid too far apart on the bobbin, or when laid too close together? Bob.

Hank Clocks for Drawing Frames.

Editor:

Is it feasible to have hank clocks on drawing frames and where should they be applied? C. D.

What Twist to Have.

Editor:

When twisting 20s four-ply into a suitable yarn for weaving cloth, what would be the most satisfactory twist to have in both the single and in the ply yarn? Twister.

Answer to Col.

Editor:

What causes yarn bobbins as they fill on spinning frames to vary in diameter? Beg to advise the party that several conditions will cause such variations as follows:

1. The wear of the travelers from new to wornout.
 2. The change of the weather from exceedingly damp to exceedingly dry.
 3. The change of the yarn running from heavy to light and vice versa.
 4. New and old rings.
 5. New and old spindle whorls.
- Supt.

Answer to Weaver.

Editor:

What is the advantage of two-ply over single yarn selvages? On all first-class cloth weaving, where an especially nice selvage is wanted, a two-ply twisted yarn selvage will show up better than a single-yarn-made selvage. It will also weave much better. Even on some of the cheaper fabrics it sometimes pays to substitute a two-ply selvage for a single yarn selvage. One very large mill making gingham, shirtings and dress goods changed the entire mill over from single yarn selvage to two-ply twisted yarn selvage. The appearance, strength and the better weaving, less seconds, reduced waste, increased production more than repaid this mill for the extra expense. Manager.

Answer to Weaver.

Editor:

Answering the question by Weaver, What are the advantages of weaving single yarn fabrics with two-ply yarn selvages?

First, any count of single yarn plied gives two times the original strength plus 10 per cent, therefore using one end of ply yarn instead of

The Practical Discussion Department of the Southern Textile Bulletin is open to all readers whether they are interested in seeking information on technical questions or are willing to help "the other fellow" who has experienced trouble in some phase of his work.

The questions and answers are from practical men and have often proved extremely valuable in giving help when it was urgently needed.

The interchange of ideas between superintendents and overseers develops a great deal of worth while information that results in much practical benefit to the men who are concerned with similar problems.

You are invited to make free use of this department and to join in discussing various problems that are mentioned from week to week. Do not hesitate because you do not feel that you are an experienced writer. We will take care of that part of it.—Editor.

two of single yarn, you have a 40 per cent stronger selvage.

Second, when using a ply yarn for selvage, you avoid the twisting together of the outside ends, which is very troublesome on some constructions.

The weaving quality of a ply yarn selvage is far superior to single yarns, therefore effects an increase in production, which is of interest to all weavers.

My experience has been to use ply yarns for selvages as much as practicable. Designer.

Hanks and Yards on Full Roving Bobbin.

Editor:

May I ask, through your answers department, the rule for computing the amount of yards or hanks on a full bobbin of roving? South.

Answer to Spinner.

Editor:

Should the bobbins fill the rings? No; they should not. This will make slack twisted yarns and chafed yarns. There must also be room for the traveler between the ring and the yarn on the bobbin. Supt.

Answer to Overseer.

Editor:

How to remedy the waste of time caused by the picker man not being at the spot when the lap knocks off is a question put out by "Overseer." May I inform him that we have overcome a similar trouble in this way. We have a one-man picker room, too, and we had an annunciator bell connected with the knock-off lever shaft. By putting a pin into the shaft, when it comes around, it comes in contact with a charged wire and rings a bell one-quarter of a minute before the lap is to knock off. This enables the picker man to reach the spot before the lap knocks off. We find this so convenient that all the lost time in this connection is eliminated. I might add that our picker man feeds a bale breaker, takes care of one intermediate lapper, and one finisher. He makes 100 finished laps per day of 36½ pounds each net weight.

He carries all of the laps in the card room and lays them down on the card racks. He cleans his own pickers, opens 30 bales of cotton per week, picks the sacks, bundles the hoops and weighs his waste.

All Said.

Answer to Strength.

Editor:

Why is yarn stronger when made with heavier travelers? is asked by "Strength." If not asking for too much space, will you please allow me to explain this matter? In the first place yarn which is spun with heavier ring travelers will have the very weak spots broken before testing. The weak spots are replaced with stronger strands when pieced up.

In the second place. A reasonably heavy tension on yarns is more satisfactory than less tension, because it will lay the yarn on the bobbins more evenly. That, there will be no tight and slack lengths of yarn wound on the bobbins. And when this yarn is tested for strength, every strand bears a more evenly distributed load of the strain per strand. Technical.

Steam Accumulators in Textile Plants

The principle of the Ruths steam accumulator is now generally understood and there is no need to describe the method of operation, though it is of interest to consider the application of this new aid to power economy in textile factories. The Ruths accumulator has so far been applied to about seven of the largest dyeing and finishing plants in this country, including such well-known names as the Bradford Dyes' Association, Scottish Dyes, Limited, and Robert Pullar & Sons, while in other countries the accumulator has been installed in 80 textile mills and over 100 cellulose and pulp mills. In a large number of these plants the steam accumulator has been adopted instead of increasing the steam generating plant it being possible to store the heat energy of the steam during periods of low demands. In one textile works, for instance, the boiler plant was

found to be inadequate owing to the fact that much time was lost during the morning while dye kettles were being heated up, though these kettles were pre-heated for an hour and a half before the working day began. The normal capacity of the boiler plant at this works was about 40,000 lbs. of steam an hour.

A careful investigation was made, however, of the probable steam demand with the manufacturing and power processes properly co-ordinated, and it was decided to install a steam accumulator. The boiler plant consists of eight boilers, operating in two sets, and under the new arrangement the second set works at a constant pressure of 114 lbs. per square inch and supplies steam to the engine-room and the finishing plant. The high-pressure main is connected through an overflow valve to the low-pressure main, which receive steam from the first set of four boilers. The steam accumulator is connected to the low-pressure main and has a working pressure range of 70 lbs. to 28 lbs. per square inch. The pressure in the low-pressure range and in the first set of four boilers adjusts itself to the pressure in the steam accumulator, while the new arrangement permitted dispensing with a locomobile boiler which was formerly employed for supplying for supplying 5,000 lbs. of steam an hour.

Under the new scheme all eight boilers are fired uniformly, and any excess of steam generated by the high-pressure boilers is passed through the overflow valve to the low-pressure main, whence the steam passes either to the dyeing plant or to the accumulator, according to the conditions obtaining. When the demand on the low-pressure main exceeds the supply of steam from the low-pressure boilers, together with the overflow from the high-pressure main, the overflow valve automatically closes and steam is drawn from the accumulator over the pressure range of 70 lbs. to 28 lbs. per square inch, the pressure in the low-pressure boilers following that in the accumulator. When the pressure in the high pressure main drops, the overflow valve closes automatically and steam is drawn from the accumulator to supply the dyehouse.

Under the new arrangement the pressure in the high-pressure main is kept constant at 114 lbs., so that the steam engine plant is able to run continuously at a constant stop-valve pressure, while the finishing department is supplied with steam of a constant quality. It is estimated by the management that the output of finished material was increased by 10 per cent, while the quality improved as a result of rearranging the power plant and installing a steam accumulator.—Manchester Guardian.

Saco-Lowell Long Draft System

THE Saco-Lowell Bulletin gives the following relative to the company's long draft spinning system:

"In the March issue of the Bulletin we gave a brief outline of the developments of the Saco-Lowell Long Draft System in an endeavor to show the long process of experimentation that always accompanies every new development, and how that pioneering period ended by placing before the American cotton mills a system which was practical, economical, and of correct design to meet American mill conditions. It is the purpose of this article to describe our long draft system in more detail and give a few typical examples of the results being obtained from the many thousands of spindles we have already equipped.

"Long drafting is better drafting. As it is better drafting than we have had heretofore, so we are enabled to accomplish longer drafts than have been possible heretofore. It is one more step, and a very important one, in the orderly and logical advance in the practice of spinning.

"The theory of long draft systems is based on the slip draft principle. This principle has received such universal acceptance within the last few years, that it is not necessary to elaborate upon it here. The weakness of this principle was in its adaptation to regular three-roll spinning, inasmuch as it was impossible to obtain a proper break draft between the back and middle rolls. In our opinion, this difficulty with the break draft was so serious as to demand improvement before the system could be recommended for general use.

"When the function of the top middle roll is analyzed, it is clear that this roll is expected to perform two separate and distinct duties. The first is to unlock the fibres from the binding effect of the twist and start an action of drawing upon the individual fibres. This break draft requires the top rolls to be heavily weighted to give a positive drawing of the twisted roving. The second duty is to control the regularity of the feeding of the fibres, both long and short, in their orderly turn to the front rolls. The short fibres should be fed to the front rolls, while the longer fibres which are being drawn by the front rolls must be allowed to slip under the middle top roll. The slip draft, then, demands that the middle top roll be light enough to permit the long fibres to slip under it without damage. These two conflicting duties demand that the roll be both heavy and light at the same time. Such a thing, of course, is impossible, so the obvious solution is to have two lines of middle rolls, the back middle being weighted to have a positive hold, the front line being small in diameter, set close to the front roll, and having a light top roll unweighted, permitting slip draft.

"This four-roll theory is the basis of our present Le Blan-Roth System of better drafting, which we firmly believe marks the highest point yet attained in the evolution of drafting apparatus for spinning frames.

"In our system a single endless belt passes over the middle roll and is carried close to the front roll by a bar. This belt takes the place of a small front middle roll, as would be used in an ordinary four-roll system, and carries the fibres closer to the front roll, but avoids the evils inherent in a steel roll of too small a diameter. The fibres are held in frictional contact with the belt by a small top roll between the middle and front rolls. This system carries the fibres and delivers them at a point closer to the front roll than any other system. In addition to this feeding, or drawing element, is included the essential break draft equipment of properly adjusted and geared back and middle rolls.

"We have maintained for several years a long draft laboratory, the equipment of which is, for the purpose, probably unequalled. In this laboratory, and in mill operation, our engineers have conducted a long series of experiments supplemented by thorough investigations of the whole subject in this country and in Europe, and we find that this system gives the best results of any that have come under our observation.

"It is a fortunate circumstance that this system combines with its effectiveness, extreme simplicity in adjustment and operation. It has only three lines of bottom rolls, although it comprises the principles of the four-roll frame. It has but a single belt, which is held at a light and constant tension by a self-weighted take-up roll at the back of the roll stand. The belt is driven by the action of the middle roll, with which it is held in contact by the weighted top roll. It passes loosely over the bar back of the front rolls and thence to the take-up roll and then back to the middle roll. It will be seen that the point where the belt passes over the bar is at its point of least resistance, thereby giving extremely long life to the belt. If it should be necessary to replace a belt, it may be done while the frame is in operation. With a single belt such as is used on this system, it is possible to provide it with an effective but simple clearer which prevents the accumulation of fly. The accumulation of fly has been one of the chief obstacles to the successful operation of a belt drawing mechanism.

"There is no magic whatever in long draft spinning. If a certain number of doublings are necessary in a certain mill under ordinary conditions to obtain the quality of yarn they require, the same number of doublings are just as essential with long draft, and even more so because of the increased draft in many cases. It should be recognized that a little more cleaning is necessary, particularly with carding work on the long draft systems, because there are a few more parts that have to be cleaned from lint and fly. Spinners, however, have more time for cleaning, as we consistently find less ends down and furthermore the creeling is considerably reduced in

(Continued on Page 28)

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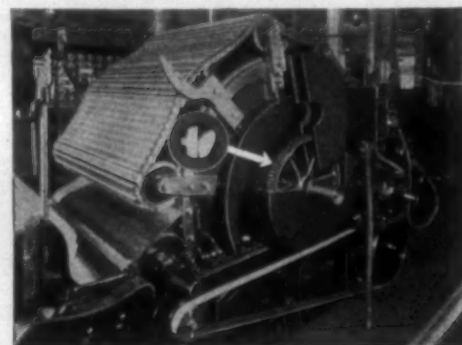
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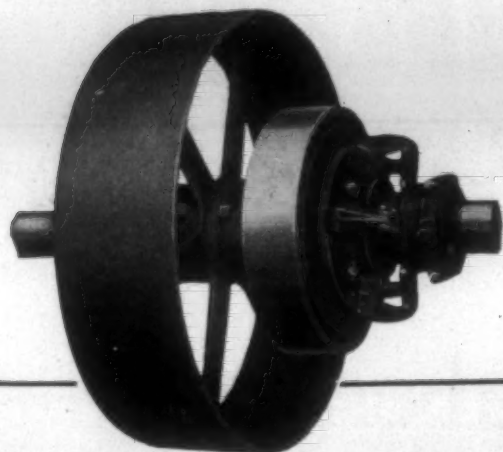
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GREAT attention is being paid to the perfecting of the processes of rayon winding, and elementary as the subject may appear in some respects, there are still a number of problems of which the solution is still being awaited. In hosiery winding for ordinary materials, the surface of the yarns is such as afford suitable friction to control the gyrations of the thread. In bobbin building the method is to have a ribbed wheel connected with a spiral rod and as the bobbin fills, this wheel comes into contact with the yarn and is turned round to cause the yarn guide to rise higher and lead the yarn on to fresh territory. In certain types of winders, the building wheel is about $\frac{1}{2}$ in. in width, so that a considerable amount of material is gripped during its operation. Similar motions in the winding of rayon have had to be abandoned entirely or greatly modified, for the building wheel ravel the rayon and creates waste. In one type of rayon winder, the surface of the building bobbin has been rounded off and slightly grooved, and only comes into contact with the yarn intermittently. It touches the yarn very slightly, but this is sufficient to impart an upward spin. This slight touching movement is supplemented by a graduated disc of six sides, which is located at the foot of the bar which actuates the rise and fall of the traverse. This rests on the heart-shaped cam, the indentation of which causes the disc to turn one division, while the point of the heart causes a further turn, these acting alternately during work. Now the disc varies slightly in height at each segment and the traverse is altered accordingly. This gives a build which produces a firm nose which is an advantage. Where soft-nosed effects occur in a bobbin these give rise to ravelling when drawing off. In another type of machine largely adopted, the frictionally turned building wheel is abandoned altogether and the traverse is made to rise a suitable degree by an adjustable device which acts quite independently of the height of yarn wound on the bobbin, and the yarn is left unrubbed by any outward agency. This has many points to commend it and in this device adjustment according to denier is possible. The racer over which the hank is placed in winding can also stand a lot of improvement in several types in common use. These are often constructed with wooden legs which radiate from the centre and the hank is stretched over supports placed across their ends. Those cross supports are often of wire which can easily slide down and are liable to get lost so that one notices crude efforts at replacement with bits of coarse twine which easily get entangled in the rayon and cause breakage. Several more solid styles are being evolved, but the trouble is that when one achieves solidity, the means of accurate adjustments for suitable widths of hank are

lacking. One style which has much to commend it and which is used on a heavier type of machine, consists in having a control of all arms of the swift from a screw situated near the axis of the swift and which is so arranged that when it is turned in one direction the swift expands all arms an equal distance, and when the direction is reversed the circumference is made to contract. In this way the hank can be adjusted to the correct tension on the swift to a very fine point; by other methods nice adjustment is often a matter of good luck, as the constituent parts easily slip out of line. Another direction in which considerable improvements in the swift has been affected, is that of the weighting of the axle which serves as a brake when the rayon thread in the hank encounters some obstruction. If left it acquires considerable momentum and this causes the thread to overwind itself and fracture. But the swift is also the pivot for the balancing motion which is now affixed to most winding machines of this category in order to preserve a certain control over varying tensions in the yarn as it is being wound off. To wind evenly is to conserve the perfection of the thread, but if the thread is being subjected to frequent jerks then this creates thinner places in the yarn and reduces the elasticity at such points. This is serious in knitting where such a toll is taken of the elasticity of the thread when turning the loop. These tugged places, too, give variable results in dyeing owing to uneven penetration of the dyestuff. To remove this jerky action as much as possible, the swift is the pivot of a balancing device which is destined to take up momentary yarn slacknesses, and likewise, tightening of the thread calls into play the stop motion, which brings the bobbin to a standstill before the thread is ruptured. Jerky winding, however, causes extensive breakage among individual filaments of a yarn and these give a furry appearance to the fabric, which develops in the finishing and subsequent operations. It also causes a local contraction and alteration of the filaments in relation to each other which changes the angle of light reflection, giving those cross shaded stripes which are such a bugbear in those goods. In some types of machines the traverse causes a combination of the parallel and the cross wind. In the upper movement of the traverse the action is slow and gives a series of layers of yarn which wind round the bobbin in a parallel order, but on the return journey, a speed is allowed to develop facilitated by gravity and the travelling of the truck over the surface of the heart-shaped cam in a downward direction and the result is that the layers are further apart in their disposition and the build partakes of a cross wound character.

(Continued on Page 26)



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Manufacturing Heather Cloth

By Columbo

HEAATHER cloth is a single cloth fabric, composed of all cotton of all cotton yarns or of cotton and jute. It is used for toweling in some cases and as clothing. In the Middle West it is used as children's suiting, that is, when it is made with a plain weave.

It is usually made of 14/1, 16/1, and 20/1 ply cotton warp and filling and sometimes of 10/1 and 12/1 cotton. This fabric has the appearance of linen, due to the heavy sizing and calendering in finishing. Small warp effect twill weaves are used, such as 2-1 either right or left hand and running 45 degrees, 16/1 cotton warp and filling heather is made of yarns both in the grey and bleached state, generally about 14/1 cotton warp and filling, in widths varying from 15 to 24 inches finished, either all bleached or with side and cross borders, or what is known as hair line plaids. Rarely in colors, except red or navy blue, are used in toweling.

The Weave

The same weaves are used in this line as in ordinary linens, namely the plain weave or 1 up and 1 down, in the commoner grades. But for bathing purposes, where a rough towel is sometimes required, there is the birdeye or huckaback weave, also the eight end honeycomb weave. Toweling having as a design floral or scroll figures, is made on narrow looms, having a jacquard machine attached; this kind is used for bureau scarfs.

Heather cloth can be woven on any power loom. The kind of loom necessary to produce any certain grade of heather cloth is governed by the construction of weave effect desired, as for instance, either the plain or twill weave effects are best adapted to the roller or cam loom. The more complicated fancy weaves such as huckaback or honey comb, necessitate the use of a dobby loom. To finish heather cloth it is first run through a sprinkler, to dampen it; then it is put through the size tub and rather heavily sized, after which it is run through a dryer. From the dryers it goes to the calenders, in which machines the gas heated top roller acts upon the sizing and produces the rather glaze effect on the face of the cloth.

Heather toweling using huckaback weave, the construction sometimes used to good advantage is: reed 850, 2 ends per dent; 18 inches wide; 16/1 ply cotton warp and filling (bleach); 46 picks of filling; finish 16 inches wide weight 1.75 yards per pound. To make a softer feel use one-half number of picks and wind 16/1 and 20/1 (one end of each) on the same bobbin, and weave it in, this also increases the mottled effect.

Heather toweling with a honeycomb weather a good construction is as follows: reed 850, 2 ends per dent; 20 inches wide; 20/2 warp and filling bleached; 44 picks of filling; loom width 16 inches wide, no finish; weight 3 3/4 ounces. Use dobby

loom on each of these fabrics.

In making honeycomb heather toweling, if using a double border, the Crompton double cylinder or two weave dobby is the most convenient, as the border weave and body weave each has its separate harness chain, and is worked from the box chain.

To finish a piece of heather cloth for the market a procedure best to use is as follows: If the piece is clean enough and a cheap rough finish is required, the first process is starching. A very light starch-liquor is necessary, to one gallon of water, two to six ounces of corn starch, one-half to one pound coconut oil softener. Mix in cold water and boil together for 30 minutes. The pieces are passed through a starch mangle at full width, over a drying machine of steam cylinders. They are then passed through a light calender to straighten out the goods and smooth down a little. They are then folded up, packed in cases and shipped away.

Bleaching.

The goods can be bleached, each piece placed separately in a kier, or the ends sewed together and the goods are then run through a washing machine and returned to the kier, and the soda boil repeated for eight hours. The goods are run through a washing machine, and through a solution of oil of vitriol 1/2 degree Tw, washed again, and run through a solution of chloride of lime at 1/2 degree Tw, piled in a bin for eight hours, run through an acid solution of oil of vitriol 1/2 degree Tw and well washed until all trace of acid is eliminated. If any acid is left in the goods the goods being very heavy, will be tender, as they will retain so much acid when dried in the drying machine and they will have the fibre of the cloth injured. The goods are then starched with four to six ounces to a gallon of starch, one-half pound of coconut oil, white softening. This to add a little fullness to the cloth without making it too stiff and starchy. The goods are then dried on a tender frame at full width, to keep them straight and have the weft perfectly straight across the piece.

Calendering.

If required they are then given a light calendering. If a light buff or echru is required a little color is added to the starch liquor or the goods are dyed on a jigger machine, or on a padded machine.

These goods will stand a great amount of wearing, and look dressy without being too expensive.

In addition to being of a light character, these heather cloths contain novelty yarn effects, which are different from many of those sold in past years. There is nothing regarding heather cloths which present any great difficulties in manufacturing. The threads per inch are comparatively few in number, thus creating no difficulty so far as production is concerned. Because the

dead or nearly so and then again we come to the heather cloths which appear next to the jacquards and seem to be coming to the front each succeeding day. Undoubtedly there is a good field for heather cloths production.

New Courses At Clemson

Clemson College, S. C. — Realizing the ever-changing and rapidly advancing needs of the textile industry of the South, and particularly South Carolina, the Textile School at Clemson College will offer several new and special courses along various lines of textile work next September.

On account of the increasing importance of chemistry in the textile industry, one of these courses will be a full four-year course in textile chemistry and dyeing. This course includes the full four years of work in the chemistry department of the college with special work in junior and senior years in the textile chemistry and dyeing department of the textile school under Professor Mullin. Opportunity will also be given for special work in physical and colloid chemistry, both of which play an important role in the textile industry of today. This course leads to the B. S. degree and will meet the ends of bleaching, dyeing and finishing industry of the South.

On account of the present wide interest in the rayons, the textile school will offer an optional course next semester in the chemistry of cellulose which will be followed by a course upon the chemistry of the rayons.

Besides the regular course in textile engineering, many opportunities for specialization in the various phases of textile manufacturing will also be offered, such as special work in textile chemistry and dyeing, yarn manufacture, weaving and design, general textile manufacturing, industrial education, etc. Special short courses in a combination of subjects fitting the special needs of the student will also be offered.

Professor Mullin is now in Europe studying textile education, textile schools, laboratories and equipment for these new courses. He reports many things of interest and has already obtained a mass of new and very valuable information and material to be used in enlarging and further developing the Textile School at Clemson College.

Pacific Mills' Statement.

A market summary by Pacific Mills says:

"Business has been spotty with seasonal quietness prevailing in some lines, buyers at this time of year holding down operations as far as possible. But in spite of this the strength of the cotton market has decidedly influenced gray cloth prices with the result that on staple cloths operations have been more or less forced on the buyers in anticipation of their necessities after July 1.

"There has been a noticeable increase in volume of business on staple fabrics since the first week in June.

cloths are made from those used in the fabric described. The fact that the material is different from that which has been formerly sold, and the fact that large quantities have been made is sufficient to show buyers who have not purchased any that they are losing the chance of making large profits when they are available.

Any cloth which shows a very high rate of profit to a manufacturer is likely to show as large, or a larger, rate of profit to a succeeding seller, and until competition developed more than is noted at present the profits will be very satisfactory.

The question which has been uppermost in the minds of buyers and manufacturers of cotton goods lately—What cloth can I manufacture or sell to take care of my distribution and mill and be certain that a good profit will be secured and on which no slump is likely. So this cloth seems to give a good suggestion for that present day ill. Manufacturers have been just as interested as buyers, for unless some kind of a novelty style is in demand, it is very probable that none of the desirable profits which are often responsible for satisfactory mill operation are received. Possibly a short explanation of the conditions which exist may be desirable in view of some of the opinions of some sellers who are always trailers and who never achieve any remarkable success in cloth production and distribution. Jacquard styles have been selling well and mills have quite a few orders for such goods, but in any case these styles do not have any great effect on the bulk of the distribution. Quite a portion of the jacquard styles being made today are considered as semi-staples and are not at all new. Good sellers state positively that the best of the demand for present styles in cotton jacquards is over and that a declining demand, together with smaller profits, is certain for the immediate future. Then there are the heavy novelty yarn fabrics which have sold well for a number of years. In the East, where the greatest portion of distribution is noted, these cloths are

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The Cotton Situation

ON June 1st we stated that according to the best studies, boll weevil damage depended to a very great extent upon the number of rainy or cloudy days during June and July, because rainy and cloudy days permitted the boll weevil grubs to hatch and emerge whereas dry, hot weather hardened the fallen squares and held the grubs imprisoned until they died.

With the exception of very few days there has been rainy and cloudy weather over the entire cotton belt since June 1st and the first crop of boll weevils have had an ideal hatching season and will undoubtedly be heard from later.

In view of the private reports that are coming to us from all over the South we can not understand the boll weevil report just issued by the Government.

In the Charlotte Observer of July 2nd we note the following:

The boll weevil is off to a good start in Mecklenburg County and is attacking the first cotton squares savagely, County Commissioner W. M. Ross, of Providence Township, reported when he was in town to attend the monthly meeting of the County Board.

The Commissioner predicted unprecedented loss of cotton by the boll weevil this year in view of the late cotton crop and the weather conditions favorable to the pest's development.

One man told us that on Sunday he stopped his car at a cotton field and picked five boll weevils from a very short row of cotton.

It should be borne in mind that real damage from boll weevils does not show up in the Carolinas until about August 25th.

The question of the cotton acreage will be partially settled by the Government report of July 9th.

In our opinion the acreage is not much, if any, above 43,000,000 acres and the abandonment is going to be the largest on record.

Last year, with 42,000,000 acres and an almost perfect growing season, including an open fall, that added, at least, 500,000 bales, a crop of 12,950,000 bales was produced.

With a late start, excessive wet weather, and poor stands in many sections, we can see no legitimate reason to expect a crop of more than 13,000,000 bales and a bad fall season could easily reduce that figure by 1,000,000 bales.

When unfavorable cotton mill business developed last fall there were many who predicted that the consumption of American cotton would shrink to 15,000,000 to 15,250,000, but in spite of curtailment it will prove to be close to 16,000,000 bales and can be depended upon to be in excess of 16,000,000 bales during the year beginning August 1, 1928, because there are 20,000,000 more people in the world than were one year ago.

It is reported that Secretary Hester has forecasted an August 1st carryover of American cotton of 4,265,000 bales, and if that is correct we have the following situation confronting us:

Aug. 1, 1928, carryover	4,265,000
Indicated crop	13,000,000
Total supply	17,265,000
Probable consumption	16,000,000
Aug. 1, 1929, carryover	1,265,000

It is, of course, realized that the world supply of American cotton can not be reduced to any such figure as 1,265,000 bales.

For sake of argument, assume that the carryover is 5,000,000 and that through phenomenal weather for the remainder of the season the yield per acre exceeds last season and a crop of 14,000,000 bales is produced. Assume also that the consumption of American cotton drops to 15,500,000 bales.

Aug. 1, 1928, carryover	5,000,000
1928 crop	14,000,000
Supply	19,000,000
Consumption	15,500,000

Aug. 1, 1929, carryover	3,500,000
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Thus we see that giving the extreme figures on the bear side we would face a reduction of 1,500,000 bales in the carryover and that would not have a bearish influence.

Having considered possible extremes on one side it is well to look at the possibilities upon the other.

With poor stands and probably heavy deterioration due to sappy plants resulting from excessive rains, also probability of heavy boll weevil damage as result of lateness of crop, it is entirely possible for the crop to be 11,500,000 or less.

With a consumption of 16,000,000 bales under present conditions, it is probable that an improvement in textile conditions, which should be seen within the next twelve months, would raise consumption to 16,250,000 bales and under these extremes we would have the following:

Aug. 1, 1928, carryover	4,265,000
1928 crop	11,500,000
Supply	15,765,000
Tentative demand	16,250,000
Shortage	485,000

We do not say that any such condition will exist but we do assert that it could exist and it is well for mill men to realize the possibilities.

Some men say that the crop will be 14,000,000 and some still hope for 15,000,000, but to produce either figure there must be a yield per acre in excess of the ten-year average in the face of a late start and many other unfavorable conditions.

Some men say that the consumption of American cotton will drop to 15,000,000 bales, but give no reason for any such prediction and are unable to explain why it did not drop to that figure under the depressed textile conditions that have existed since last August.

We have no desire to needlessly alarm the users of American cotton but we do feel that a very serious situation can only be avoided by a complete change in weather conditions and the assurance of an open and extremely favorable fall season.

The decline in cotton which followed the unjustified prediction of Department of Agriculture last fall and the erroneous carryover estimate, caused the Southern farmers to plant less acreage than was needed and unless we miss our guess the textile industry will pay a big price for that decline.

After That Million

DURING the fight against the proposed Federal Child Labor Law we repeatedly stated that it would mean a \$1,000,000 annual appropriation for the Children's Bureau of the U. S. Department of Labor and the securing of the million dollars was the real reason why the enactment of the law was being attempted.

Two laws were passed, but we carried both of them to the United States Supreme Court where they were declared unconstitutional.

They next attempted a constitutional amendment but secured the approval of only four of the necessary thirty-six States.

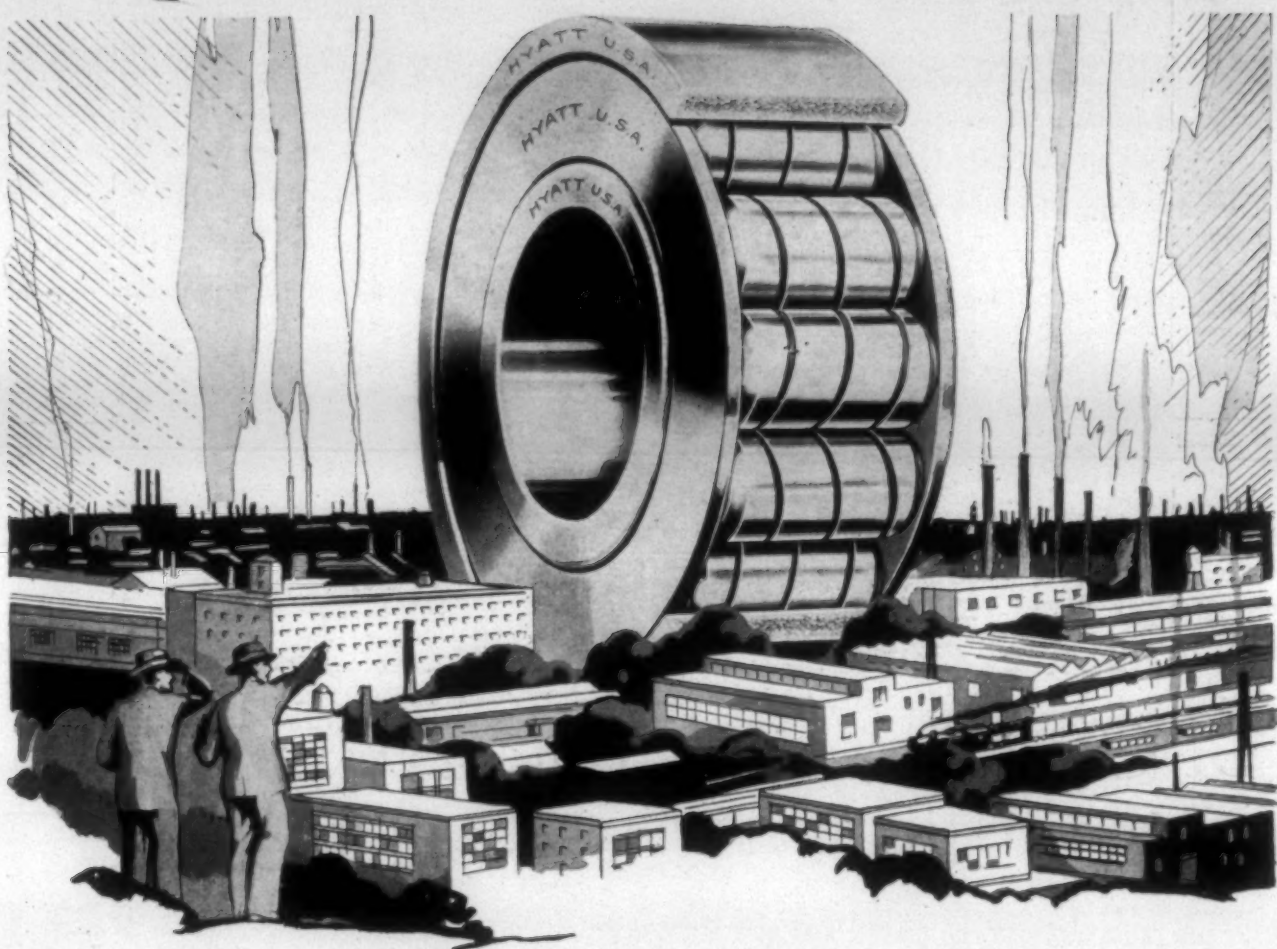
Being blocked at every turn they now come out boldly and ask for the \$1,000,000 annual appropriation, which we charged they were trying to secure by subterfuge. It is interesting to note that they ask for the exact amount named by us as their objective.

On May 28th, Representative Walter H. Newton of Minnesota introduced a bill for a yearly appropriation of \$1,000,000 (in addition to its present appropriation) for the Children's Bureau of the U. S. Department of Labor.

Although it has no connection with commerce the bill was referred to the committee on Interstate and Foreign Commerce, which is known to be a radical committee.

The bill appropriates the \$1,000,000 for "Child Welfare" with no restrictions and if enacted a large portion of the money will be used as slush fund with which to secure ratification of the Federal Child Labor Amendment and thereby secure the permanency of this \$1,000,000 annual appropriations.

Miss Grace Abbot and the other parasites who are living on Federal funds without rendering any real service therefore, will never rest content until they get another million of the tax-payers funds with which to enlarge the present asylum for old maids and grass widows which is the proper name for the useless Children's Bureau of the U. S. Department of Labor.



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Operators can't produce good work on bobbins that run out of true, that are off-size, poorly finished, or otherwise defective, and their natural action when they strike such a bobbin is to heave it in the trash can.

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First cost by no means tells the story. In the long run it always costs less to buy U S guaranteed bobbins. Often the first cost is no higher.

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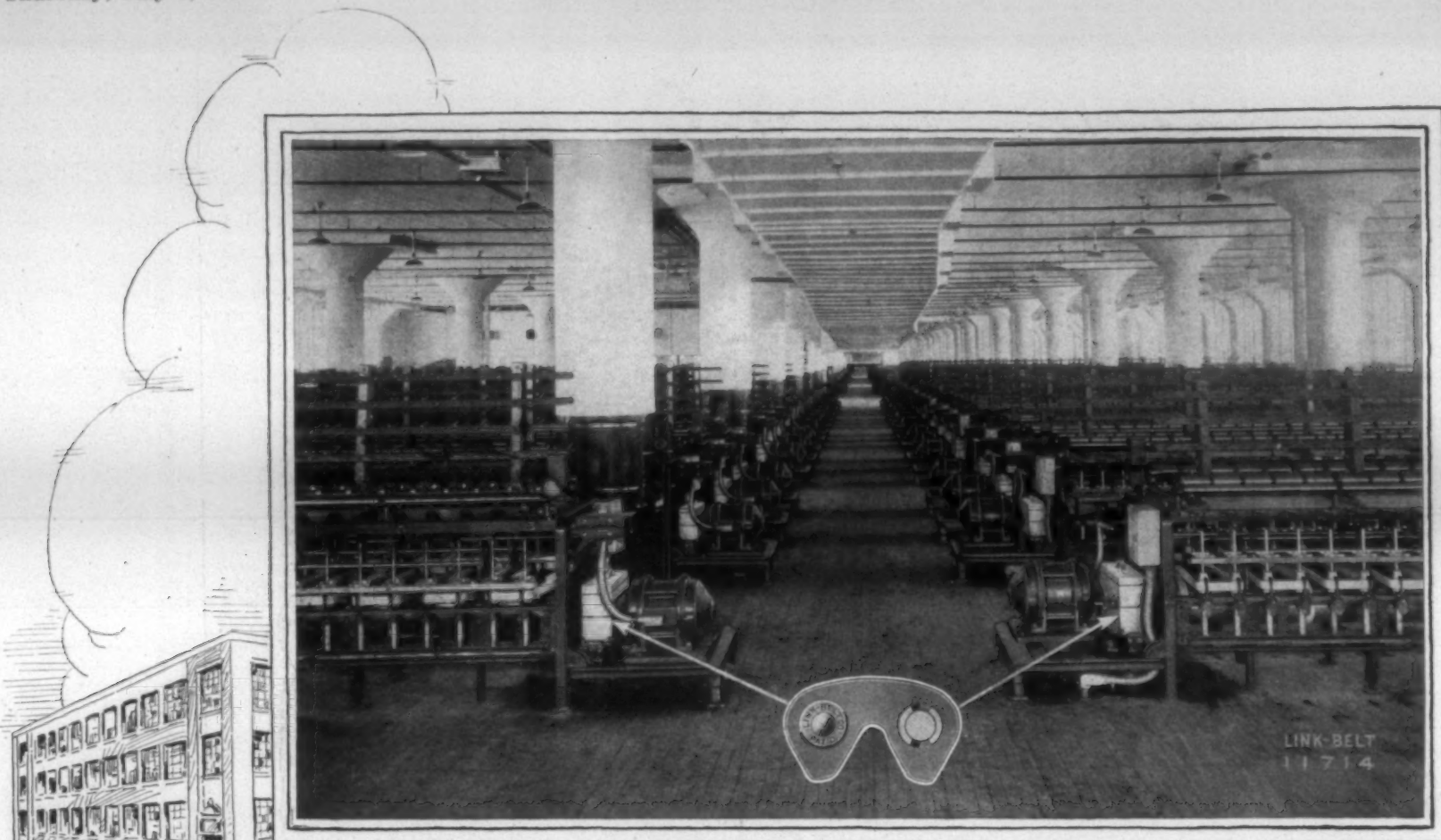
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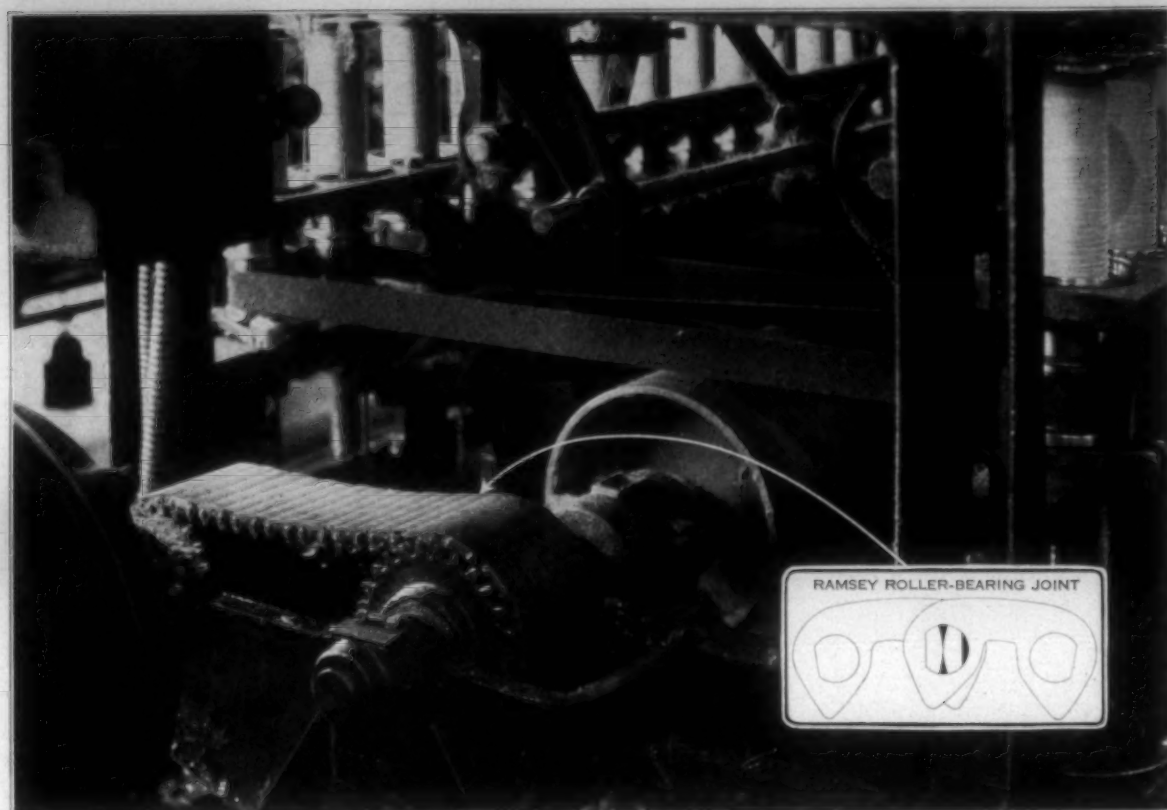
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tion Company.
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Machine Company, Toronto, Canada.

Personal News

Frank Hancock, second hand in carding, Manetta Mills, Monroe, N. C., has resigned that position.

F. D. Webster has become superintendent of the West Knitting Company, Wadesboro, N. C.

E. W. Mullin is now superintendent of the Richmond Hosiery Mills, Etowah, Tenn.

C. W. King is now superintendent of the Aycock Hosiery Mills, Whitwell, Tenn.

J. S. Hill, formerly of Pineville, N. C., is now second hand in carding, Manetta Mills, Monroe, N. C.

V. H. Dorsey, of Clover, S. C., now has a position in the machine shop at Manetta Mills, Monroe, N. C.

L. K. Thomas is now section hand in spinning at the Villa Rica Cotton Mills, Villa Rica, Ga.

J. L. Conner is now secretary of the Eufaula Cotton Mills, Eufaula, Ala.

L. E. Carroll has become superintendent of the Eufaula Cotton Mills, Eufaula, Ala.

George Johnson is now superintendent of the Autauga Cotton Mills, Prattville, Ala.

J. H. Carpenter is now superintendent of the spinning mill of the Perkins Hosiery Mills, Columbus, Ga.

L. C. Turner has been elected secretary of the Summerville Cotton Mills, Summerville, Ga.

F. R. Smith is now superintendent of the J. W. Sanders Cotton Mills, Starkville, Miss.

E. J. Brown has succeeded John Moser as superintendent of Perfection Hosiery Mills, Burlington, N. C.

B. P. Murphy has become superintendent of the Knit-Well Hosiery Mills, Durham, N. C.

A. W. Niemer is now superintendent of the Forest City Hosiery Company, Forest City, N. C.

J. A. Killenberger is now secretary of the Southern Webbing Mills, Greensboro, N. C.

O. A. Parsley has become superintendent of the Belle Vue Manufacturing Company, Hillsboro, N. C.

C. Q. Rhyne is now superintendent of the Mauney Mills, Knigs Mountain, N. C.

W. B. Duncan has succeeded J. M. Fowler as superintendent of the Hickory Hosiery Mills, Hickory, N. C.

P. A. Carpenter has succeeded J. P. Chester as superintendent of Steele Cotton Mills, Lenoir, N. C.

Clayton Smith is acting as superintendent of the Icemorlee Mills, Monroe, N. C.

F. L. Holland has succeeded J. T. Jordan as superintendent of the United Mills, Mortimer, N. C.

W. E. Merritt, Jr., has become superintendent of the Renfro Hosiery Mills, Mount Airy, N. C.

N. C. Teague has succeeded B. L. Ledwell as superintendent of the Fiber Manufacturing Company, Newton, N. C.

U. L. Hafer has succeeded W. H. Carson as secretary and treasurer of the North State Cotton Mill, Taylorsville, N. C.

C. A. Byles has succeeded W. W. Burton as superintendent of the Southern Mercerizing Company, Tryon, N. C.

C. A. Smoot has succeeded E. H. Wilson as secretary and treasurer of the Silk Tie Knitting Company, Knoxville, Tenn.

Marvin Lassiter, Aldora Mills, Barnesville, Ga., has been promoted to section man at night over cable twisters and cord winders.

Joe Knight, recently of Fort Mill, S. C., is now with Manetta Mills, Monroe, N. C., and working in the card room.

Marion Raborn, formerly of McRae, Fla., has accepted the position of superintendent of the laundry at Ware Shoals, S. C.

W. N. Pate, of Laurel Hill, N. C., has become overseer of carding at the Great Falls Manufacturing Company, Rockingham, N. C.

W. M. Dampier has resigned as superintendent of the Richmond plant of the Morgan Cotton Mills, Laurel Hill, N. C.

C. B. Bennett has become superintendent of the National Yarn and Processing Company, Chattanooga, Tenn.

G. W. Lloyd has succeeded B. C. Freeland as superintendent of the Slane Hosiery Mills, High Point, N. C.

C. T. Freeman has succeeded Leslie H. Buck as superintendent of the Howard Silk Throwing Company, Mebane, N. C.

E. H. Underwood, of Thomaston, Ga., is now day section man over cable twisters, cord winders and the baling department, Aldora Mills, Barnesville, Ga.

J. B. Buchanan has resigned as general overseer of carding at the Lane Cotton Mills, New Orleans, La., and returned to his former position as general overseer carding at the Maginnis Mills, of the same city.

Francis Lynch will be president of the Saratoga Victory Mills, which will establish new mills at Albertville and Guntersville, Ala., each mill to have 45,000 spindles and 500 looms.

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MILL NEWS ITEMS OF INTEREST

Burlington, N. C.—The E. M. H. Knitting Mill has been incorporated by Lyn B. Williamson and others, the capital stock being \$25,000.

Tuxedo, N. C.—It is understood that the Green River Manufacturing Company is to construct a new weave shed and install additional looms.

Anniston, Ala.—The product of the Woodstock Cotton Mills, which formerly made damasks and sheetings, has been changed to jacquard drapery, tapestry, bedspreads and towels. C. B. Gunn is manager.

LaGrange, Ga.—The Taylor Textile Company has been incorporated with a capital stock of \$250,000 by Duke Davis and J. E. Taylor. The company plans to establish a textile mill here to manufacture cotton goods, using a special dyeing process.

Leaksville, N. C.—The Carolina Cotton and Woolen Mills are expected to let contract at an early date for an additional building to its present rug plant. The building to be 100x50 feet. The mill plans an extension to its boiler plant and a new warehouse. The number of new looms to be installed has not been announced.

Autun, S. C.—A new weave shed costing approximately \$20,000 is under construction at the Pendleton Manufacturing Company. The firm of C. M. Guest & Son secured the contract for this structure and work has already been started.

The new addition to the mill will be for the purpose of expanding the department devoted to the manufacture of high grade velours for upholstery. It will be completed in September.

Burlington, N. C.—The name of Holt, Love and Holt, weavers of jacquard upholstery has been changed to the Piedmont Weavers. J. Spencer Love is president.

Montgomery, Ala.—Montala Mills are making preparations to close down their plant for an indefinite period. The stock in process is being run out and it is expected that all operations will be suspended by this week-end. The plant has been manufacturing sheetings and drills, with 11,552 spindles and 300 looms.

Huntsville, Ala.—Gallivan Building Company, Greenville, S. C., was awarded the contract for building an addition to the plant of the Lowe Manufacturing Company. The company will build a large picker room and work will begin as soon as the necessary materials can be assembled.

The contract was let from the office of J. E. Sirrine & Co., mill engineers.



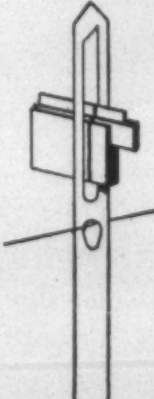
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Columbus, Ga.—Fire and water damage done at Mill No. 1 of the Eagle & Phenix Mills here Sunday morning is being repaired and the mill's new machine shop building started several weeks ago is nearing completion.

The fire started in a lot of yarn roping stored on the second floor, supposedly from spontaneous combustion.

Firemen reached the blaze through the roof and extinguished it after about two hours work. There was considerable water damage.

Rock Hill, S. C.—The Lund Textile Company, Inc., which recently leased about 36,000 square feet of floor space in one of the buildings at Rock Hill, formerly occupied by the Anderson Motor Company, has renovated the plant and is installing machinery for the manufacture of draperies, upholstery and special fabrics. It is planned to start with 36 jacquard looms and necessary preparatory machinery, and to install additional machinery as conditions warrant. Operations are expected to start in August. Paul L. Brandt, New York, is president of the company; J. W. Weinberg, Boston, Mass., treasurer, and J. T. Lund, Shrewsbury, Mass., secretary and general manager. These officials are also officers of the Lund Textile Company, of Fisherville, Mass., of which A. P. Duchesneau is business manager and buyer and James Lund, superintendent.

Union, S. C.—The Liberty Fabrics Corp., rayon knit manufacturers, went into the hands of receivers. Judge Thomas S. Sease of Spartanburg, signed an order naming J. G. Hughes and D. N. Jones, of Union, co-receivers.

The bill stated that the mill is solvent, but numerous creditors are pressing their claims, and that unless a receiver is appointed to take charge of the assets of the defendant and wind up the affairs of the concern under the order of the court, plaintiff and other creditors will suffer irreparable loss, and the defendant, by reason of its creditors pressing their claims, is in imminent danger of insolvency and might become insolvent if its assets were sold under sacrifice conditions.

It appears, the bill continues, that it is for the best interests of all parties that the receiver be appointed to take charge of the assets and wind up its affairs.

The plaintiff is represented by Nichol, Wyche & Barnes, while the defendant is represented by Barron, Barron & Barron, of Union. The receivers are authorized to continue the operation of the plant for the purpose of working up the raw material on hand and to complete the unfinished product now in process of manufacture, making complete garments. They are authorized to have such dyeing done as may be

necessary, and to purchase such other materials as may be necessary, and to borrow money for the operation of the plant up to \$1,000 without a further order of court.

The creditors are enjoined from proceeding against the corporation other than through this proceeding, and all creditors are given 90 days in which to prove their claims. The matter is referred to A. G. Kennedy, judge of probate of Union county, ex-officio master, to take testimony.

Americus, Ga.—A large textile mill, now located at Gloversville, N. Y., will be moved to Americus immediately, it was announced by the Chamber of Commerce. The name of the mill could not be ascertained.

To secure the location of this new industry, residents of Americus subscribed \$35,000 in bonds and common stock of the plant. It is expected that removal of the plant will be completed, and that it will begin operations in its new site not later than October 1.

A number of sites are under consideration. The plant, which will have a payroll of \$800 in the beginning, will manufacture rayon underwear. It is expected that the payroll will be increased until it reaches about \$2,000 per week.

All of the subscriptions for the bonds and stock of the concern were made payable in cash, and the money is now either in the hands of the local committee promoting the enterprise or its payment has been guaranteed by local financial agencies.

Bedford, Va.—Preston, Pollard & Overstreet, who received the contract for the erection of the new woolen mill for the Bedford-Johnson Woolen Company have begun work. The unit plan is being used and the present contract calls for three units: a spinning mill of three stories, a dye house and a weaving shed of one story and partial basement under each.

About two hundred men will be employed in the building, and, to hasten the work, Mr. Overstreet expects to use both day and night shifts.

Local labor so far as possible will be used, many of the workmen being former employees of the mill, who were thrown out of work by the recent fire which destroyed the mill. Skilled workmen will be secured wherever possible. It is expected that the new plant will be completed in about four months and will be fireproof throughout.

The plans call for many square feet of windows, these to have steel sash. The new plant will have 100,000 square feet of floor space and the floors will be especially constructed of several ply to provide ample support for the machinery.

Social Service Convention

Rock Hill, S. C.—The 10th annual convention of the Southern Textile Social Service Association, embracing a number of the Southern commonwealths, concluded its three-

day session at Winthrop College, Rock Hill, Saturday, after what was pronounced by the delegates as the

best convention in the history of the association.

Officers for the ensuing year were

elected as follows: President, J. O. Thomas, of Spray, N. C., editor of the textile publication, the Arrow; vice-president, Mrs. Mae Nichols, of the Pacific Mills, Columbia, S. C.; secretary, Miss Lucile Clark, of Chester, S. C., welfare worker at the Baldwin Mills at Chester and of the Aragon-Baldwin Cotton Mills, Inc., treasurer, Miss Mary Stanly, of Greensboro, N. C.

It was decided to hold the 1929 convention at Blue Ridge, N. C., in connection with the industrial conference.

Efforts were set on foot looking toward getting every Southern State not now a member to join.

The nominating committee for next year's officers were appointed as follows: E. B. Peck, of Whitney, S. C., Miss Pearl Wyche, of Greensboro; Miss Belle Fuller, of Pacolet, S. C.; L. P. Hollis, of Greenville.

The second day session was a crowded day with many notable speakers. Delegates were present from North and South Carolina, Virginia, Tennessee, Georgia, Florida and Alabama.

The outstanding addresses Friday were as follows: "Community Health—A Successful Project," by W. R. Westmoreland, of the Pacolet Manufacturing Company, of Pacolet, S. C.; "Relativity" was the theme of Dr. Archibald Henderson, educator-writer of the University of North Carolina, of Chapel Hill; "The Innermost Worth of the Undermost Man," by Dr. H. W. Mills, of Clemson College, S. C.; "Training for Leadership," by Prof. W. D. Maginnis, of Winthrop College; Miss Mary E. Frayser, textile social work director told of "Developing Personalities in Industrial Communities;" Dr. F. W. Greeg, of Rock Hill, discussed "Place of Religion in Social Work;" "Human Relationships in Industry," by Rev. W. P. Peyton.

Late Friday a delightful surprise picnic was given the delegates by Alexander Long, of Rock Hill, president of the Aragon-Baldwin Cotton Mills, chain of textile manufacturing plants. A number of the important group meetings were held in the afternoon.

Winchester, Va.—The Virginia Woolen Company plans the immediate building of an additional unit for weaving woollen fabrics.



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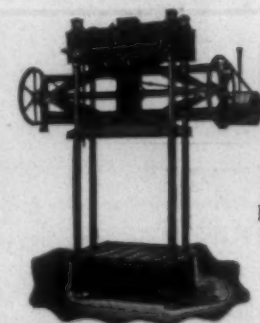
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Developments in Winding Rayon Silk for Hosiery

(Continued from Page 18)

The style of the differential in silk winders corresponds to existing types by which the speed of the bobbin is varied according to the position of the traverse and the thread guide. When the guide is at its upper region of traverse the yarn is passing on to the small part of the bobbin stem and the speed should then be at the highest. This speed should be gradually reduced as the traverse drops, so that when it is leading yarn to the lower part of the bobbin which is thick with yarn, the speed is at its lowest owing to the greater length of yarn which a revolution takes up. In one type the driving wheels are located on the lower shaft which rises and falls. This shaft is provided with drums of a large diameter to act by friction against the disc at the foot of the bobbin spindle. This shaft is rising and falling varies the

speed. When the shaft is at its highest point of traverse it is driving the bobbin spindle slowly as one turn represents a small distance of contact, when the shaft is at its lower position each revolution represents a distance several times as great and the speed is increased accordingly. The cone-like bobbin is stated to have an advantage as its thread balloons over the knots made in the yarn. In such a cone the build is not quite so definite as that of the bottle bobbin and the outside is not so clearly shown as a place to which those knots should be brought to miss the thread as it is being withdrawn. In the conically-shaped bobbin the ballooning throws the thread more or less clear of attachment with the bobbin and trapping in knots is thus avoided to some extent. Sometimes these bobbins are grooved throughout and a wire is attached spirally round the bare bobbin to facilitate the withdrawal of the yarn.

But there is a great difference of opinion regarding the efficiency of the single process winding of artifi-

cial silk; it is recommended that manufacturers should wind their own yarn as they ought to be able to save several pence per pound at least by so doing, and they know that it is freshly made and has not been in package for a long time, to degenerate in quality by the influence of heat or moisture. The single process winding naturally commends itself to the manufacturer as being direct and obviating a double set of machines and a double set of workers, but he is generally able to knit the material immediately after winding. The makers of rayon, however, apparently favor the double process system where the yarn is taken from hank to the double-ended bobbin at a first operation and, if desired, transferred to bottle bobbin at a second operation. Many firms prefer the yarn in this state and buy it so for, with bobbins of the type used on the cap-spinning frame good results are obtained in working and the yarn gets tensioned in being drawn off. It is also an eminently suitable package for yarn which has to be warped for

use on the warp loom as they can be placed on a horizontal spindle where the weight of the bobbin acts as a brake on the thread and gives better and more equal tension throughout. The small double-ended bobbin is greatly favored by the maker of rayon, and this is wound usually on a very simple type of machine where the racers or swifts are located under the level of the eye of the worker and the winding takes place through the medium of a series of discs arranged on a shaft which revolves with a perfectly even action. The bobbin is fixed on a spindle at the two ends of which are discs which are made to revolve in contact with the larger wheels on the driving shaft. The guides are made of glass or porcelain and the traverse is of the simplest, as the thread is slowly made to travel from side to side over the width of the bobbin. The ends of the spindle are in frictional contact with the driving discs and the contact is so light that when the thread traps in the hank this drag is quite sufficient to stop the bobbin from turning and

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the breakage of the thread is thus avoided. From the whole simplicity of the action, it is clear that the yarn is transferred to the bobbin with as little agitation of its structure as can well be possible and satisfactory work can be produced. But if the double-ended bobbin is not suitable and the bottle bobbins are still required, then this can be done on the Universal type of machine and the rest of the operation completed at a high speed of winding. Various attempts have been made to reduce the number of points of contact of the thread on its way to the bobbin, in hank winding machines a certain amount of deviation is absolutely essential in order to give sufficient length for the balancing levers to function. But in winding from the double-ended bobbin the length is short. In some types also attempts have been successfully made to reduce the number of manual operations essential each time the thread is connected up and the various points are now arranged in relation to each other, that the operator has but to press a

button and the path opens up so that the thread falls into its place over the various points without any action on the part of the operator beyond that of laying the thread in its correct straight line. This is a reducer of fatigue and greatly simplifies the winding operation.—The Textile Recorder.

Kitzmiller Case Hearing Postponed

Philadelphia, Pa.—At the request of counsel for Morimura, Arai & o., of New York, Judge Kirkpatrick, of the U. S. District Court here, postponed indefinitely the hearing on the request of Morimura for a revocation of the court's decree extending to July 23 next the continuance of the business of F. Y. Kitzmiller Sons Co., hosiery manufacturers, by Charles F. Leippe, receiver, and to order an immediate liquidation of the company's affairs.

The postponement was granted without counsel for either party be-

ing in court, as word was conveyed to the judge over the telephone that counsel desired a delay, and as the attorneys for the receiver offered no objection the request was granted.

The Kitzmiller Company owned plants at Reading, Pa., Rogersville, Tenn., and at Big Stone Gap and Gate City, Va. The three Southern mills were discontinued by the receiver almost immediately upon his appointment, but he has continued the Reading plant for more than four years.

The Morimura company, whose claim is for over \$100,000, demanded a prompt liquidation of the affairs, asserting that inasmuch as the receiver had been unable to dispose of the company in his four years' tenure it is not likely that he will be any more successful now, and that the longer the company is kept in operation the less chance the creditors have of receiving substantial dividends on their claims.

Replying to a statement by the receiver in his petition of May 21 last, when he was granted the extension to July 23 that he had received

three tentative offers for the assets one of which was from a party who desired all of the properties, the Morimura Company asserted that this offer comes from a man named Mr. Mulcahy, who is not connected with the hosiery industry, but is a promoter, and that his offer of \$500,000 for the assets is "simply part of a promotion scheme." Several months ago Mr. Mulcahy made a similar offer which was rejected because his terms were not satisfactory, the Morimura company asserted.

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Saco-Lowell Long Draft System

(Continued from Page 17)

a majority of cases. No mill would think of throwing out the humidifiers because the pipes collect lint and fly and require periodical cleaning. They are content to clean these pipes as often as necessary, because experience has taught them that humidifiers are a real necessity. We feel that this is the attitude mills will soon take towards our theory of spinning, as the savings made possible by this device are also a real necessity in these competitive times.

"While the economic advantages of increasing the draft, at the same time producing better yarn, are perfectly obvious, we feel that a few examples from recent installations will be of interest. One well known manufacturer of tire cord was primarily interested in producing a stronger yarn from their present grade of cotton. This particular mill consisted of 25,000 spindles on 23s yarn. The preparatory machinery was poorly balanced and it was necessary to run part of the roving frames nights. We worked out an organization for this mill, keeping the same number of doublings, whereby they would be able to do away with all of their overtime work, and in addition discard two of their slubbers, four intermediates, and twelve roving frames, making a total of eighteen frames.

This new organization translated in dollars and cents would make a saving of \$47,142 per year on labor alone, according to the mill's own figures. In addition to the labor saving, there was a saving of approximately \$4,000 a year in power, plus the saving in supplies, lights, floor space, etc."

Cotton Prospects

C. T. REVERE, of Munds & Winslow, in his weekly cotton letter, says:

"Weather and crop advices have continued to dominate the cotton market in the last week. In some respects this may be considered rather illogical as no underlying improvement has been reported from textile circles where demand for goods continues limited and margins are still dismally below a replacement basis. Under such circumstances, therefore, it requires a decidedly unfavorable outlook for future supplies to furnish a valid ground for further advance in prices.

"Some close students of textile conditions are inclined to doubt the wisdom of taking too pessimistic a view of the textile outlook. The finished product is moving slowly, it is true. Prices are unsatisfactory and unprofitable. The corrective is to say that this presents an alarming position.

being applied through drastic curtailment, however, and it looks not

only as if over-production would be remedied but a condition of actual scarcity of goods created—certainly if any appreciable buying movement develops. Some of our textile friends believe that if the present curtailment program is maintained throughout July, the supply of goods and yarns in the hands of manufacturers by July 31 will be less than one month's output.

"Our crop advices lead us to believe that the attitude of placing major emphasis on supply at this time is justified. The Weather Bureau this week issued what might be termed a "denatured" report, officials apparently having determined on a policy of refraining from mention of weevil activity and confining observations entirely to weather. We understand that this change of policy, if it may be called such, is due to a desire to avoid duplication of advices issued by the Bureau of Entomology.

"Quite apart from this, however, the weekly report issued Wednesday was decidedly out of tune with advices from other reputable sources. The summary of the report might have been construed as giving warrant for expectation of a large yield. It fairly radiated improvement. Whether this was due to inability to give competent interpretation of advices received or bureaucratic timidity in expressing positive conclusions will remain an unsolved puzzle. As a supplement to our letter this week, we are reprinting the crop letter of the Gar-

side Cotton Service. Both in respect to detailed comment and conclusions drawn therefrom, this authority leaves no doubt that the crop suffered a decline in condition last week. We attach much importance to the Garside crop advices this season as they are under the supervision of Z. R. Pettet, formerly with the United States Department of Agriculture, and we believe they are worthy of high regard on account of conscientious compilation of data and unbiased conclusions.

"Our Dr. George D. Smith is now making a special weevil observation tour throughout Georgia, southern Alabama, and the Carolinas. He reports increasing infestation under the fostering influence of showery weather. We understand that this telegram from Dr. Smith and shall not attempt to quote them in detail. We summarize his observations and interpretations as follows:

"The crop observed on a trip from Madison, Florida, via Moultrie, Georgia, to Union Springs, Alabama, and back by way of LaGrange, Georgia, to Americus and Cordele is spotted with much of it yellow, sickly and a month late. Some of the March planted fields have a few small bolls. The late cotton is just beginning to square. Weevil infestation is becoming more general, and while infestation is confined to areas near woods, this infestation in some cases runs as high as thirty per cent, and will furnish a basis for migration to late planted fields later in the season. Weather is most fa-

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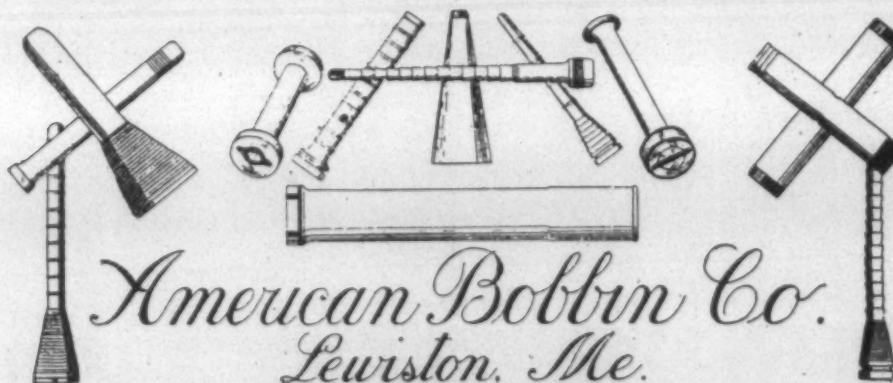
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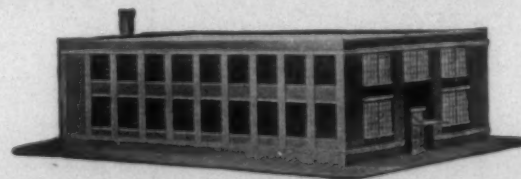
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avorable for weevil propagation and the first generation which is now beginning to become adults in early planted fields, furnishes a menace to the later planted cotton. Dr. Smith says that while initial infestation is not much heavier than last year measured by the calendar, it is much heavier when the lateness of the crop is taken into consideration. In other words, the late planted cotton has not the chance of escape that the earlier cotton of last year enjoyed. In one of his telegrams he says: "If weather continues cloudy and cool as at present for a few days longer, weevils will destroy practically all late planted cotton. My opinion southern Alabama and southern half Georgia will fall several thousand bales short of last year's production account weevil menace and being fully three weeks to month late."

"Dr. Smith presents an interesting and graphic summary of the situation. He says, considering the moderate initial infestation, this crop had two chances of evading disaster. If it had been an early crop a fair amount of cotton would have escaped destruction through the setting of bottom bolls as was the case last year, even in spite of a showery June. Also, even with a late crop the damage would have been minimized if June had furnished normal control weather. It may be seen, however, that both of these beneficial 'ifs' are absent. The crop is abnormally late and June is abnormally wet. We do not hesitate

"The technical position of the market, in our opinion, is much stronger than the extent of the recent advance would lead one to believe. Profits have been taken on each spurt upward, and floor professionals have made their customary forays to bring about reactions. Indications of clearing weather brings its flood of selling orders.

"These tactics remind us of a statement made by the late E. G. Scales two or three days before his death a few weeks ago. Mr. Scales was remarking on the lateness of the crop, its poor start and the imperative necessity for continued good weather to bring about an average yield. He concluded his comment by saying: 'This year, sunshine will break the bears.' This seeming paradox contains a world of speculative wisdom.

"As for the market, we think the tendency will be upward until or unless there is a prolonged change for the better in weather conditions or unless the bureau in its August forecast informs the cotton trade that its pessimistic conclusions regarding the crop are not warranted."

Celanese Plans Addition.

Bids will be received early in July for new two and three-story additions for the plant of the Celanese Corp. of America in Amcelle, Md. These are said to cost in excess of \$1,500,000. It is said that the company is planning also the erection of five storage buildings to cost \$130,000, contract for same being let to Hughes Foulrod Co. of Philadelphia.

Finds Acreage High, Condition Low

An increase in cotton acreage of 5 per cent over last season and the lowest June condition figure on record are indicated in the cotton report as of June 23, issued by J. W. Jay & Co. The acreage is estimated at 44,048,000 and the condition is given at 68.7 per cent.

They summarize conditions as follows:

"To the cotton trade, June with few exceptions has always been considered a month in which the plant should show fair improvement.

"This year the situation has not been encouraging as is indicated by the percentage condition for the entire Belt as of June 23, namely, 68.7 compared with 70.0 on May 18 last month and a 10-year average of 73.6.

"The lowest June condition on record since 1893 is 69.2 in 1921, so that a percentage of 68.7 for this month establishes a new low.

"With the season from two to three weeks late, it will require most ideal climatic conditions from now on and greatly restricted weevil and other insect activity to overcome the poor start.

"The indicated acreage is 44,048,000 (a 5 per cent increase), compared with 41,905,000 acres planted last year and 44,838,000 reported last month. Correspondents in the Central and Western States fear that with a continuation of excessive rainfall some of the acreage will be lost as many fields are grassy and time to clear is rapidly passing.

"Weevils are appearing over a wide area although as yet no damage is reported because of the lateness of the season, which, in turn, means a small plant and delayed fruitage.

"Since the date of our survey (June 23) belated reports received indicate further deterioration."

Knit Underwear Output

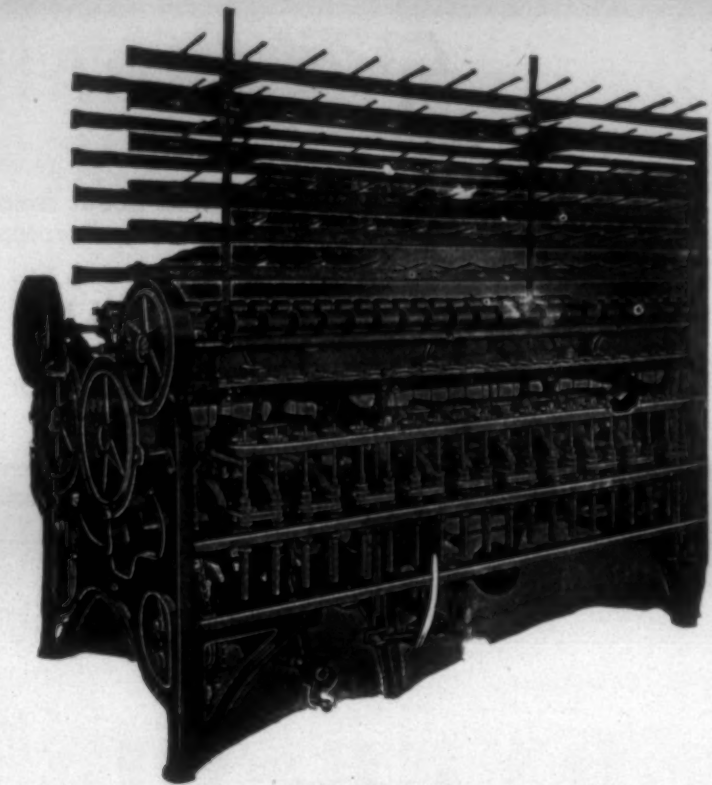
Washington, D. C.—Knit underwear production both summer and winter, during May compared favorably with the preceding month, but stocks on hand end of month on hand at the close of the preceding month, according to figures made public by the Department of Commerce, based on reports from 148 identical establishments.

According to the department's figures, production in dozen garments was as follows:

Men's union suits, 278,994; men's shirts, 145,286; women's drawers, 62,543; boys' union suits, 84,701; boys' shirts, 2,204; boys' drawers, 965; misses' union suits, 46,022; misses' shirts, 18,447; misses' drawers, 13,730; children's and infants', 148,077.

Orders and shipments in dozens were as follows:

Unfilled orders, first of month, 2,244,582; new orders received, 1,040,817; shipments, 1,043,290; cancellations, 14,796; unfilled orders, end of month, 2,227,583.



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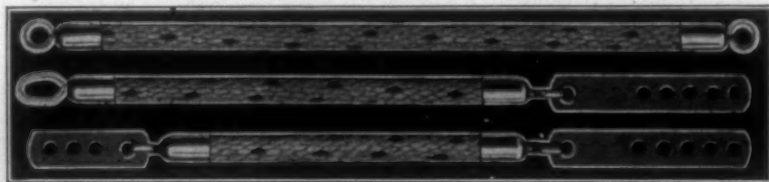
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MIDNIGHT OIL.

In day of old
When knights were bold,

They burned the midnight kerosene.
Now Fiaps and sheuks,
'Mid shouts and shrieks.
Burn up the midnight gasoline.

Spinning Tests of Soft Cottons

In marketing their product, growers of cotton in New Mexico have been experiencing considerable difficulty because about 50 per cent of their cotton is termed soft, says a report from the Bureau of Agricultural Economics. They are being penalized in price on the general assumption that a soft cotton is an inferior cotton and on the assumption that it produces weak yarn of poor spinning quality. The average cotton classer distinguishes between hard and soft cotton; experienced classers can distinguish three gradations with a fair degree of accuracy—soft, normal and hard. Just what effect these characteristics may have upon the spinning quality of cotton is not definitely known.

The cause of this soft characteristics of cotton is more or less a matter of conjecture. Various theories are advanced by growers and buyers in Mesilla Valley, N. Mex., as to the cause of so-called soft cotton. Among the suggested causes are lack of irrigation in the fall and subsequent failure of late bolls to mature; lateness of picking; lack of moisture in the fibre on account of the low humidity of the country; type of soil (for instance, excessive amount of alkali in the soil in specific sections) and the deterioration of strains or varieties of cotton which have been grown continuously in the valley.

It was the purpose of this test, therefore, to study these so-called soft cottons, to ascertain whether the manufacturing quality of these cottons grown in New Mexico justifies their being so penalized; to determine whether the late-picked cotton is inferior to the earlier-picked cotton, and if so, to what extent; and to study the effect of soil upon the cotton tested.

For test purposes nine lots of cotton were selected. Four of these lots were grown in two definitely different types of soil, fairly heavy valley land and sandy mesa soil, respectively. From each of these soils an early and a late picking were taken. The five remaining lots were selected from five different fields in the valley; they represent various pickings and soils. These lots are regarded as representative of the cotton locally regarded and sold as soft.

Summary.

The lots of cotton describe in this test were selected as representative of cottons grown in New Mexico, about fifty per cent of which are commonly classed as soft by the buyers and growers of that State. The price of such cotton is lower than that of normal cotton, for so-called soft cotton is reputed to produce weak yarn of poor spinning quality. Numerous causes are advanced for the production of soft cotton, notably, poor irrigation, late picking and alkaline soils. The nine lots of cotton representing various soils and pickings were tested this so-called soft cotton produces poor yarn, and to study the effect of soil

and season of picking on manufacturing quality.

Although only three lots of this test cotton represented first pickings, the classers in Washington classed all lots as medium in fibre body and normal in strength. This would seem to indicate that late pickings are not necessarily inferior in manufacturing quality. Probably the kind of weather to which the late cotton is subjected is a determining factor. Late pickings tend to show a slight increase in waste over earlier pickings.

Spinning quality, as demonstrated by the amount of waste and by strength and uniformity of yarns spun from these lots, upholds the classification of these cottons as normal. These spinning-test results indicate that these cottons are unduly penalized when marketed as soft. The waste of these lots approximates the average waste found in similar grades and staples grown in other sections of the cotton belt, and the strength and uniformity of the yarns spun compare favorably with those of similar grades and staples previously tested.

The element of soil as reflected in the strength and uniformity of the yarns spun in this test appears to be more or less negligible. The presence of alkali in excess did not seem to injure the cotton fibre or the resultant yarn.

The manufacturing qualities of these lots of cotton, as evidenced by these test results, justify their classification as normal rather than soft.

Newport Announces a Vat Brown

Newport Chemical Works recently announced the commercial production and availability of a vat brown to be known as Anthrene Brown RA. It is the equivalent of the products classified in the Color Index as No. 1,151, which are, as all fast color dyers know, types of great importance in their field. The tans produced are practically staple shades of brown with most dyers and the ease of production of them with this type makes it a perennially popular color. The type is known, according to the announcement, for its great fastness to light, which makes it useful for materials to be used for draperies, upholstery fabrics, and the like.

In addition to light fastness it is said to possess all the desirable resistance to other color destroying influences that characterize the anthrene group, and therefore to be important for the production of shirtings and other fabrics which must endure repeated visits to the laundry. Its ease of reduction, excellent leveling properties, and the fact that it is practically unaffected by metals make it particularly suitable for machine dyeing. As vats are obtained with relatively small quantities of alkali silk as well as cotton and rayon can be dyed without injury.

Leaflets showing dyeings and giving directions for application may be obtained direct from the company.

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Handling Rayon Yarns

(Continued from Page 8)

cent, making the yarn almost impossible to run without at least some oil. By using humidifiers and keeping the room at approximately 60 per cent relative humidity, very satisfactory results are obtained. This avoids the necessity of scouring the fabric after knitting, which does not always remove all the oil, causing streaky dyeing, and also eliminates the danger of disintegration caused by oil going rancid and deteriorating the strength of the yarn in spots. This latter condition usually shows up in small pinholes in the fabric sometimes after the goods are finished.

Prints, Velvets and Novel Weaves Favored for Winter

(Continued from Page 12)

plain crepe de chine, radium, foulard and rayon satins were of greater relative importance in the East; printed crepes, printed sheers, novelty weaves and wool mixtures in the East, and black silks, plain sheers, tub silks and striped broadcloth in the South.

Classes of Stores.

"White cotton, printed linen and pique were relatively of much greater importance in the spring season in exclusive stores. Gingham, tissue and madras, all cotton printed crepe and plisse and wool-like fabrics were at their best in popular price stores. Crepe mixtures (cotton crepe mixed with either rayon or silk) was the only type of fabric in which average price stores exceeded the others in the value of sales.

"Gingham and wool-like fabrics have their greatest relative value of sales standing fabrics in small towns were plain-colored cottons, printed percales, sateens and broadcloth for both the spring and fall periods. The East leads in the value of sales of printed linen, pique and crepe mixtures; the West in printed organdie, swiss, rayon voiles and satins and yard dyed rayon fabrics; the South in white cottons, plain-colored cottons and gingham.

Plain Crepe de Chine Prices

"Fifteen per cent of the total sales of plain crepe de chine were made at \$1.49 and \$1.69; 37 per cent at \$1.95 and \$1.98, and 20 per cent at \$2.50 and \$2.98 per yard. There were ten other price groups which totaled 26 per cent.

"In popular price stores 30 per cent of the sales of plain crepe de chine were made at prices below \$1.95 per yard, while in exclusive stores only 3 per cent of their sales were at these prices. On the other hand 50 per cent of exclusive store sales were made at prices over \$2.50 per yard, as against 8 per cent in popular price stores. It is interesting to note that from November, 1927, to February, 1928, about 33 per cent of all sales in popular price stores were made at prices over \$1.98 a yard; while from February to August 1927, only 22 per cent of

the business was done at these prices: \$1.69, \$1.95, \$1.98 and \$2.50 are the outstanding price groups at which plain crepe de chine is sold. These amount to almost 60 per cent of the sales of this fabric.

Prices of Rayon and Wool Mixtures.

Of the total sales of rayon and wool mixtures 20 per cent were made at \$2.50 and \$2.98; 33 per cent at \$3.49 and \$3.50 and 11 per cent at \$4.95 and \$5. There were six other price groups totaling 27 per cent.

"In popular price stores 25 per cent of the sales were made at prices less than \$2.50, while in exclusive stores there were no sales shown within this price range.

"Prices of \$2.98 and \$3.49 were outstanding in popular price stores and whereas \$2.50 \$3.50 and \$5 were distinctly important prices in the exclusive stores, amounting to 75 per cent of the sales.

Rayon Satin Prices.

"Sixteen per cent of the total sales of rayon satin were made at 59c, 69c and 79c per yard, 24 per cent at 98c and \$1, 15 per cent at \$1.39 and \$1.50 and 12 per cent at \$1.69 and \$1.95. There were ten other price ranges totaling 33 per cent.

"Forty-four per cent of the sales of rayon satin in popular price stores were made at prices below \$1 while in exclusive stores less than 9 per cent of their sales were made within this price range. Sixty-three per cent of the sales in exclusive stores were made at prices over \$1.39 per yard as compared with sales of 9 per cent in popular price stores. Sixty-nine cents, \$1, \$1.25, \$1.50 and \$1.69 were the outstanding price groups at which rayon satin was sold. These amount to over 40 per cent of the sales of this fabric.

Printed Rayon Alpaca Prices.

"Forty-three per cent of the total sales of printed rayon alpaca and radium were made at 49c and 59c, 24 per cent at 79c, 85c and 89c taken together, and 7 per cent at \$1 per yard. There were 7 other price groups which totaled 26 per cent.

"In popular price stores 63 per cent of the sales of printed rayon alpaca were made at prices below 65c a yard, while in exclusive stores only 16 per cent of their sales were made at these prices. On the other hand, in popular price stores 27 per cent of their sales were made at prices over 69c a yard, while in exclusive stores 76 per cent of their sales were made within this price range; 49c, 59c and 89c are the outstanding price groups at which printed rayon alpaca is sold, these amounting to 52 per cent of the sales of this fabric.

Prices of Printed Cotton Voile.

"Forty per cent of the total sales of printed cotton voile were made at 39c, 49c and 59c, and 30 per cent of the sales were at 89c, 95c and \$1, taken together. There were eight other price groups which totaled 30 per cent. In popular price stores, 73 per cent of the sales of printed cotton voile were made at prices up to and including 50s per yard, while in exclusive stores only 23 per cent of their sales were made at these prices; 27 per cent of exclusive store sales were made at \$1 and \$1.25

per yard, as compared with 8 per cent. In popular price stores 66 per cent of the sales of cotton prints were made at prices up to and including 39s per yard, as compared with 34 per cent in exclusive stores. On the other hand, there were twice as many sales made in exclusive stores at prices over 39c a yard as there were in the popular price stores; 29c, 39c, 45c, 49c and 59c are the outstanding prices at which cotton prints are sold. These amount to about 80 per cent of the total sales of this fabric."

Groupings Defined.

The foreword of the report gives definitions of terms and the scope of the research. Information was obtained for two periods November, 1927, to February, 1928, and February to May, 1928. These periods are referred to respectively as fall and spring. The relative importance of the groups as to total sales was determined on a dollar basis; in other words, the per cent which the given group of fabrics takes of the total value of sales of the department was estimated.

In the silk group "all blacks" included all fabrics in plain black, irrespective of their constructions, with the exception of velvets. Satin-faced fabrics included plain satins and crepe-back satins, but not rayon satins. The crepes included all the heavier constructions, but not the sheers, which, in a separate group, comprised the chiffon, voile and the heavier sheers, such as the romaine and elizabeth types. Under the "tub silks" all Chinese and Japanese silks, such as shantung, pongee and bautai, were group together.

The wash goods department was subdivided as follows: White and plain colored goods constituted a separate group. There were four different groups of rayon-mixed fabrics; crepes were divided into two classifications. There was one separate group for wool-like cotton fabrics, such as serge, challis and granites.

Proper Care of Jacquard Harnesses

C. & K. Loom-inary publication of Crompton & Knowles Loom Works, gives the following advice on the care of jacquard harness:

"Obviously the life of jacquard harnesses should be estimated in 'operating hours' rather than 'calendar years.' Much depends on local conditions. With proper care, a harness in which the angle is not too severe at the selvages and where the work is light may be in shape for a long period, whereas certain fine sley harness equipped with heavy lingoes and controlling tight warps may have broken ends before the end of two years.

Humidity Affects Them.

"Were it not for their susceptibility to humidity, we would advise avoiding any form of harness dressing except at the comber boards and near the glass rods. Where harnesses are exceedingly dense in the board, due to an abnormal number of ends to an inch, we believe their free action is retarded by harness dressing. As a protection against

humidity, and to lengthen their life, it is our practice to employ two preparations, harness oil and heddle varnish—on twine in the grey. We do not recommend the use of these preparations on harness leashes or heddles that have been treated with any other preparations.

Danger in Improper Dressings.

"The variation in 'home made' dressings is seen in the effects of those containing too much drier, making harnesses brittle and shortening their life, and causing harnesses to collect lint and other foreign matter to an objectionable degree. C & K harness oil and heddle varnish are products of careful research and experiment in our laboratory and being compounded by the formula found most effective should not be changed by thinning or adding a drier.

Application of Harness Oil.

"First stir the preparation thoroughly with a stick. (Do not shake the can.) Apply with clean cotton cloth rubbing into the harness well, avoiding as much as possible an up and down movement on the twine. With more clean cloth wipe off the oil to prevent it hardening on the harnesses and becoming gummy and sticky. Allow to dry at least two days—depending somewhat on atmospheric conditions.

"Twine heddles should be treated in the same manner as the harness. We recommend wetting them four or five inches on either side of the mail eye with warm water containing about a tablespoonful of soda to each pail of water. (The soda prevents rusting the mail eyes.) Be sure heddles are dry before applying the harness oil.

Applying Heddle Varnish.

"After being treated with 'harness oil,' and thoroughly dried, the heddles should be treated about four or five inches on either side of the eyes with one coat of our 'heddle varnish' and again allowed to dry. The harnesses are now ready for the warp.

Separation Important.

"The harness lines above the comber board should be separated about 24 hours after the dressing has been applied. The heddles should be separated for 24 hours after the application of harness dressing and again for the same length of time after applying the varnish. Unless they are separated, you will have rough heddles; and if harness lines stick together, imperfections in the woven fabric will result.

"The use of a thin and perfectly smooth stick run up and down between the harness lines and also between the heddles, handled in the best manner in the illustration, is the best way to make the separations.

"The process just described of applying oil and varnish is most effective when C & K specially prepared products are used. If you follow the instruction closely, the jacquard harnesses in your mill will be kept in good condition and give as long service as might reasonably be expected of them considering local conditions and the work required."

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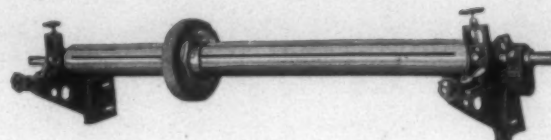
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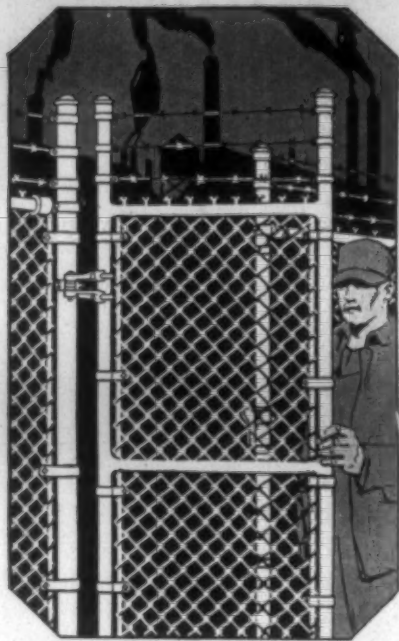
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Equipment Replacement Policies and Principles

(Continued from Page 14)

Installation a good investment then the equipment in use is obsolete, no matter whether it is but six months old, or has been at work for twenty years and has thus absorbed the traditional 5 per cent depreciation carried on the books. Length of service has nothing to do with obsolescence. The old accounting traditions that assume twenty years of service for equipment and forty for buildings have had a tendency to handicap the thinking of many executives with regard to replacement.

The exceptional industrial concern—the concern that takes a progressive and modern view of the replacement question — subjects its equipment to rigid scrutiny for the purpose of determining obsolescence. Its management knows that to find obsolescence is to find a sure way of increasing profits. And when it finds such a case, the progressive management will gladly borrow money at 5 per cent, if necessary, in order to earn a much greater interest return through the ownership and operation of the improved equipment. The up-to-date manager seizes upon such opportunities as eagerly as the shrewd investor snaps up good securities offered at a substantial discount. All of which may be said to illustrate the "positive" attitude toward improved machinery.

Many concerns, however, do not take this positive attitude. Perhaps certain members of the board of directors feel reluctant to authorize appropriations to replace machinery that to all appearances still offers many years of service. Superintendents and plant engineers frequently find it harder to "sell" the management in such cases than to put up with the inconvenience of inferior machinery. This illustrates what may be called the negative attitude toward improved machinery. Between these opposed viewpoints, one finds all shades of practice and opinion, certainly a sufficient variety to bear out the statement that real policies are needed. Some executives refuse to consider the purchase of new equipment unless it promises to pay for itself with the first year. Others buy on snap judgment and thus load the plant up beyond the dictates of good business. I know of one prominent concern that discovered, after placing an order for \$250,000 worth of new equipment, that, through poor production management, the existing equipment was being operated on a utilization factor of less than 30 per cent. Over-capacity conditions are largely brought about by the lack of definite replacement policies.

Five Principles of Replacement

Until the groundwork is laid for a real science of replacement, perhaps the best course for the executive to follow in such matters is to work out his own policy, adhering as closely as possible to the principles consciously or unconsciously employed by concerns that have

demonstrated leadership. In general, the five principles that follow will be found to apply:

1—Recognition of the profitability of power replacement, and the assumption of a positive, receptive attitude toward improved machinery.

2—Constant check on the degree of utilization of existing equipment to determine whether or not it is giving all it can.

3—Continual study of alternative machinery on the market, and comparison of its performance with that now installed to determine whether obsolescence exists.

4—Prompt replacement where actual obsolescence is indicated, regardless of length of service of equipment in question.

5—Labor and sales policies that permit the worker and the public to share in the benefits secured

Budgeting Production Proving Effective

Some time ago attention was called to a plan of "budgeting production" in a group of cotton goods men who were reporting regularly on statistics to the Association of Cotton Textile Merchants and through it to the Cotton-Textile Institute. The plan has been working for two months successfully and it has gone far enough to demonstrate that it looks like a real remedy for the ills of the industry.

In brief, it was determined to recognize the known fact that mills were overproducing in relation to the known volume of consumption. The next step was to determine to the satisfaction of each member what the actual consumption was. That was not as difficult as it seemed. It was then determined to allot production to each mill in accordance with its producing capacity and the known volume of consumption of their goods, deducting the stock on hand to arrive at what the real curtailment of output should be.

After wide and free discussion the idea was sold to every member of the group. As curtailed production meant higher costs it was decided to ask a fair price for the stock on hand or for any other goods to be produced under the allotment. This week it was shown that stocks were declining slowly, and, because of the demand remaining about normal, it was possible to make a further effort to get a price in keeping with the rapidly rising cost of cotton. As the stock declines and more production becomes necessary new allotments can be made, but at no time do the members intend to overproduce in relation to consumption.

The idea was sold readily, partly in consequence of the announcement that the stock would not be sacrificed further, and again because it was threatened openly that if real co-operation were not tried by the group the most efficient producers would enter upon competition that would hasten the end of many of the plants.

The story of what has been done has been filtering through the trade and two other groups whose busi-

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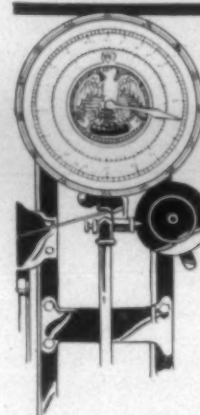
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ness has been in deplorable shape are now getting together to "budget production" and put a value on the stock on hand that will not continue to demoralize buyers nor wreck mills.

Merchants who have studied the plan are confident that it is the only one yet advanced that will prove to be a real remedy for the constant losses in the industry and the instability of values that has been making buyers fearful of placing orders for what they believe to be their normal trade requirements.

It is said that until production has been regulated in this way it is hopeless to expect much from voluntary co-operation. Before inducing men to try co-operation seriously it had been necessary to provide for the surplus stock and put a value on it in keeping with the added costs of reproducing it under the plan of allotment. It is the form of handling output that is followed in steel, automobiles and hundreds of other industries that remain competitive but not foolishly unprofitable.

So accurately have some figures been prepared that it is possible for groups in the industry to state within 1 per cent the actual consumption of a given construction of sheeting used in the bag trade. The thing is true of sheets and pillow cases and some other lines.—Journal of Commerce.

The Labor Extension
(Continued from Page 7)

ginner something to look forward to.

Probably the most important reason why such a change is made is the beneficial effect on the running of the work in subsequent departments. It is axiomatic that no change can be made in preparatory processes, no matter what the immediate benefit, that will affect adversely the operation in the weave room.

The engineer engaged in this kind of work must always think in terms of the plant as a whole and so co-ordinate the various processes that the final results are beneficial to the stockholders of the plant. It is an economic fact which cannot be disproved that no permanent advantage can possibly accrue to labor unless capital and management are reasonably recompensed simultaneously.

If such a plan were merely a visionary dream that might possibly work out in practice, then it would have to be given a very careful and limited trial. On the contrary, a constantly increasing number of mills are adopting similar methods with results which are satisfactory to their management as well as their operatives.

During the transition period, there are literally thousands of problems which have to be worked out and solved. If everyone is patient and approaches the subject in a true spirit of co-operation, there is little doubt in my mind that the mills in your city will emerge from this textile crisis stronger and in a better position to compete against the mills in other sections of the country.

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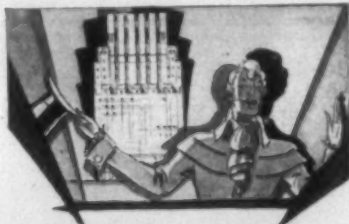
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GREY COTTON GOODS

CARDED YARNS

COMBED YARNS

Cotton Goods

New York.—Further slight improvement in the cotton goods markets was evident last week. Prices were somewhat higher on many lines, due to higher cotton prices. As a rule, buyers of cotton goods have not yet shown enough interest in higher cotton to cause them to place long forward contracts. Most of the business has been done for delivery in July and August.

There was moderate buying of print cloths and sheetings on the rising market, and prices were from a quarter to a half cent higher. Prices on tickings, chevots and some of the other colored lines were half a cent to 2 cents a yard higher.

The most encouraging development in gray goods was the substantial inquiry which came out on print cloths and sheetings, totalling several million yards. Much of it failed to shape up into business on account of the low bids which were made, most of them differing 1/4 cent from sellers' ideas. A fair number of smaller commitments were placed, among them orders for up to 100,000 yards. Quotations were somewhat more stabilized on the firm side. Moderate selling of 68x72s was reported at 9 cents, which could not be shaded, 9 1/2 cents being fairly general. Buyers took 80 squares at 11 cents, a tight price on these. For the 64x60s, 7 1/2 cents was paid and 8 cents freely quoted; some second hand lots sold at 7 1/2 cents. The best that could be done on 60x48s was 7 cents, on which a number of transactions were put through. There was the chance to cover on 27-inch 64x60s at 5 1/2 cents for September, 6 cents otherwise the market. A few 8.20-yard brought 5 1/2 cents and 7.15-yard, 6 1/2 cents.

A number of centers reported that their week's business in sheetings showed considerable improvement. Somewhat less interest was noted at the week end, but there were some good-sized lots of lightweight styles sold, and prices continued to stiffen. Sales of 37-inch, 48x48, 4.00 yard, at 8 1/2 cents net were reported early in the week, in a good way. Later, seven-eighths appeared to have become the best and a number were quoting even money for contract. There were sales of 36-inch, 48x40, 5.50 yard, at 6 1/2 cents net, spot. Some were holding at five-eighths. There was business in 40-inch, 48x48, 2.50 yard, at 12 1/2 cents net reported,

spot. Sales of 40-inch, 48x48, 2.85 yard, at 11 1/2 net. Some trading in 40-inch, 44x40, 4.25 yard, at 8 1/2 cents net, with some quoting three-quarters for later deliveries.

The quotable basis on rayon and cotton mixtures has held irregular, reports on sales showing fluctuating prices have been paid, some of them depending on quality or mill make. A little was done on 64x48s at 15 1/2 cents in the East for domestic B grade rayon-filling and 19 cents was paid for 64x60s on the same basis. The 64x44s have been taken at 14 1/2 cents and 13 1/2 cents is viewed as the market on desirable makes of 60x40s, though some lower prices have come out during the week, the lowest on carded warp constructions.

The 80x60s showed strength among the carded broadcloths. For spots of non-feeler motion qualities, buyers found they had to pay 9 1/2 cents. Apparently, on Thursday, the quick deliveries of feeler-motion goods available at even money had been pretty well cleaned up. There were some Aug. feeler-motion goods sold at one-quarter. Spots of 90x60 and 100x60 continued to be reported at 10 1/2 and 11 cents, respectively, but for later sellers are holding for one-quarter to one-half cent higher.

With estimated sales for the week placed at close to 40,000 pieces, covering all styles and constructions, a better feeling existed in the Fall River print cloth market. This volume is approximately double what has transpired during weeks of last two months. There has been considerable feeling around by buyers sounding out the possibilities of the market and mills look forward to this inquiry developing into business.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x60s	6 1/2
Print cloths, 27-in., 64x60s	6
Gray goods, 38 1/2-in., 64x60s	7 1/2
Gray goods, 30-in., 68x72s	9
Gray goods, 39-in., 80x80s	10 1/2
Dress gingham	12 1/2 to 15
Brown sheetings, 3-yd.	12
Brown sh'tgs, 4-yd., 56x60s	9 1/2
Brown sheetings, stand.	13
Tickings, 8-oz.	22 to 23 1/2
Denims	19
Staple gingham, 27-in.	10 1/2
Standard prints	9

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for

Southern Cotton Mills

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23 Thomas Street
New York City

The Yarn Market

Philadelphia, Pa.—Higher prices for cotton and the added curtailment of production for the Fourth of July holiday period added strength to the yarn market during the week. Spinners' prices were held very firm at the advanced prices, although buyers were making strong efforts to buy below quoted prices.

The general activity of the market was considerably improved. Inquiry was better and sales were larger. While many buyers were interested in their nearby needs, a limited number were willing to buy in larger quantities for forward delivery. In general more interest was shown in weaving yarns than in the knitting counts. There was also better buying of carpet and plush yarns and insulators were more interested in their requirements.

The probable course of prices during the next few weeks will depend very largely whether the cotton advance proves to be a temporary spurt or whether the price level will remain on a higher basis. Most spinners are very bullish over the cotton outlook, while buyers tend to minimize the possibility of a further rise.

The advances made this week in combed yarns have not yet been reflected by mercerized yarns, according to prominent interests in this line, but the situation in the gray combed yarns is being watched carefully by these interests and the impression in the yarn market is that an advance of 1 to 3 cents a pound in mercerized yarns will shortly be forthcoming. No changes have been made in mercerized yarn prices since early in May. Rumors have circulated in the local market that some buyers already had been asked to pay more for mercerized yarns, but this was authoritatively denied. It was stated, however, that the adjustment begun this week in combed yarns will undoubtedly affect the mercerized. In the meantime, it is expected that combed yarns may be again marked up moderately within the next few days, although some factors say this is unlikely until toward the end of next week.

Spinners are particularly insistent on obtaining price advances where deliveries are wanted during August and beyond. This also influences most of the yarn dealers to adjust their prices accordingly. On the surface, at least, it looks as if a few weeks more of firm to higher cotton prices may place spinners in control of yarn market values.

Sothern Single Skeins.

4s-8s	33
10s	33½
14s	34
16s	34½
20s	36
24s	37½
26s	39
30s	40
40s	48
Southern Two-ply Skeins.	
4s-8s	33
10s	33½
12s	34
14s	35
16s	35½
20s	36½

24s	39
26s	39½
30s	41
40s	48½
50s	58

Southern Single Warps

4s-8s	24
10s	24½
12s	24½
14s	25
16s	25½
20s	26½
24s	28
30s	30
40s	49

Southern Two-ply Warps

8s	33½
10s	34
12s	35
14s	35½
16s	36
20s	36½
24s	38½
26s	39
30s	41

Southern Two-ply Combed Peeler, Southern Frame Spun Carded Yarn on Cones—Cotton Hosiery Yarns.

8s	32
10s	32½
12s	33
14s	33½
16s	34
18s	34½
20s	35
22s	35½
24s	37
26s	38
30s	40
40s	48
48s	44
20s	48
30s	53
36s	54
38s	55
40s	56
50s	62
60s	66
70s	76
80s	87

Southern Two-ply Hard Twist Combed Peeler Weaving Yarns

8-12s	46
20s	48
30s	53
36s	54
38s	56
40s	57
50s	60
60s	66
70s	80
80s	85

Southern Combed Peeler Single Yarn on Cones.

10s	42
12s	42½
14s	43
16s	43½
22s	46
24s	47½
26s	49
28s	50
38s	55
40s	56
50s	62
60s	67
70s	80

Two-ply Mercerized Yarn.

20s	61
26s	63
40s	69
30s	64
50s	76
60s	85
70s	97
80s	1.09
90s	1.52
100s	1.82

DuPont Rayon Price

The DuPont Company is now booking orders for August, September and October deliveries at unchanged prices, with the exception of its 100 denier super-extra, second grade yarn. The price of this grade has been advanced 10c to \$1.70 per pound.

Group life insurance approximating \$120,000 has been provided for the employees of the Spalding Knitting Mills, of Griffin, Ga., through contract with the Metropolitan Life Insurance Co. The plan has been established on a co-operative basis, whereby the employer shares the cost with the employees.

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- 1,000—24" head Section Beams, nearly new, steel bound, wood heads, at \$5.00 each.
- 1,000—42x36 Roving Cans, excellent; \$1.23 each.
- 4—7x3½ Woon. Speeders, late model, 160 spindles, serial above 10,500; \$5.00 per spindle.

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WANT position as superintendent or as overseer carding and spinning. Well experienced, good manager of help, references. No. 5438.

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WANT position as superintendent in large weave mill, white or colored. Experienced and reliable. No. 5445.

WANT position as superintendent, overseer carding or as cotton grader. Experienced and good references. No. 5446.

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WANT position as overseer spinning or twisting or both. Experienced on grades of cotton from waste to combed Sea Island yarns white and colored. 8 years experience on cord tire fabrics. Age 50. Good health. Go anywhere. No. 5448.

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WANT position as superintendent or overseer weaving. Experienced and reliable. Good references. No. 5458.

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WANT position as roll coverer. Can run shop or act as assistant. Can do anything in roller shop, and can change on short notice. No. 5461.

WANT position as assistant superintendent or designer, or both. Four years in textile college, and six years practical experience. No. 5462.

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WANT position as overseer weaving. Age 38. Experienced on plain, jacquard and other fancies. I. C. S. textile course. Know how to get good production at low cost. References. No. 5472.

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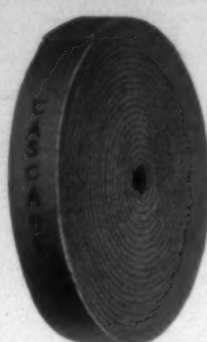
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Chain Belts and Drives—
 Charles Bond Company
 Diamond Chain & Mfg. Co.
 Link-Belt Co.
 Morse Chain Co.
 Ramsey Chain Co., Inc.
Check Straps—
 E. F. Houghton & Co.
Chemicals—
 American Aniline & Extract Co.
 Chemical and Dye Corp.
 J. B. Ford Co.
 Hart Products Corp.
 Mathieson Alkali Works, Inc.
 Seydel Chemical Co.
 Seydel-Woolley Co.
 L. Sonneborn Sons, Inc.
 Chas. H. Stone
 Jacques Wolf & Co.
Circular Cloth Cutting Knives—
 E. C. Atkins & Co.
Cleaning Agents—
 The Arabol Mfg. Co.
 E. F. Houghton & Co.
 Oakite Products, Inc.
 Chas. H. Stone
 Wolf, Jacques & Co.
Cloth Folders—
 Cocker Machine & Foundry Co.
Cloth Inspecting Machines—
 Cocker Machine & Foundry Co.
Cloth Presses—
 Dunning & Boschert Press Co., Inc.
 Economy Baler Co.
Cloth Room Machinery—
 Briggs-Shaffner Co.
Clutches— (Friction)—
 Charles Bond Company
 Link-Belt Company.
 Textile Finishing Machinery Co.
Cloth Winders and Doublers—
 Curtis & Marble Machine Co.
Coal Handling Machinery—
 Link-Belt Co.
Combs—
 Emmons Loom Harness Co.
 Steel Heddle Mfg. Co.
Combs (Beamers, Warpers, Slashers)—
 Draper Corporation.
 T. C. Entwistle Co.
Commission Merchants—
 J. P. Stevens
 Catlin & Co.
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Compressors (Air)—
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 Philadelphia Drying Machinery Co.
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 Sonoco Products Co.
Conveying Systems—
 Link-Belt Co.
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Cost Specialists—
 Rhyne, Moore & Thies
Cotton—
 Newburger Cotton Co.
 Wm. & York Wilson
Cotton Machinery—
 Ashworth Bros.
 Barber-Colman Co.
 Collins Bros. Machine Co.
 Crompton & Knowles Loom Works
 Dixon Lubricating Saddle Co.
 Draper Corp.
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 Rodney Hunt Machine Co.
 National Ring Traveler Co.
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 Saco-Lowell Shops
 Southern Spindle & Flyer Co.
 Stafford Co., The
 Terrell Machine Co.
 Tolhurst Machine Works
 Universal Winding Co.
 Whitin Machine Works
 Whitinsville Spinning Ring Co.
Cotton Openers and Lappers—
 H. & B. American Machine Company.
 Saco-Lowell Shops
 Whitin Machine Works
 Woonsocket Machine & Press Co., Inc.
Cotton Softeners—
 Arabol Mfg. Co.
 Arnold, Hoffman & Co., Inc.
 Borne, Scrymser Co.
 Bosson & Lane
 Hart Products Corp.
 E. F. Houghton & Co.
 Oakite Products, Inc.
 Seydel-Woolley Co.
 L. Sonneborn Sons, Inc.
 Chas. H. Stone
 Wolf, Jacques & Co.
Cotton Stock Drying Machines—
 The Philadelphia Drying Machinery Co.
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Cotton Waste Machinery—
 Saco-Lowell Shops
 Whitin Machine Works
 Woonsocket Machine & Press Co., Inc.
Couplings (Shaft)—
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Cranes—
 Link-Belt Co.
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 Universal Winding Co.
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 Graton & Knight Co.
 E. F. Houghton & Co.
 Transmission Machinery—
 Allis-Chalmers Mfg. Co.
 Link-Belt Company.
 Ramsey Chain Co., Inc.
 T. B. Woods Sons Co.
 Toilets—
 Vogel, Joseph A. Co.
 Transmission Silent Chain—
 Link-Belt Co.
 Morse Chain Co.
 Ramsey Chain Co., Inc.
 Traveler Cups—
 Whitinsville Spinning Ring Co.
 Trucks (Mill)—
 W. T. Lane & Bros.
 Rogers Fibre Co.
 Tubes (Paper)—
 Sonoco Products Co.
 Turbines (Steam)—
 Allis-Chalmers Mfg. Co.
 Tubing (Seamless Steel)—
 Timken Roller Bearing Co.
 Twister Rings—
 Draper Corporation.
 Saco-Lowell Shops
 Whitinsville Spinning Ring Co.
 Twisting Machinery—
 Collins Bros. Machine Co.
 Draper Corp.
 H & B American Machine Company.
 Saco-Lowell Shops
 Whitin Machine Works
 Varnishes—
 The Glidden Co.
 Ventilating Apparatus—
 American Moistening Co.
 Parks-Cramer Co.
 The Philadelphia Drying Machinery Co.
 Warp Drawing Machines—
 Barber-Colman Co.
 Ventilating Fans—
 B. F. Perkins & Son, Inc.
 Warpers—
 Barber-Colman Co.
 Cocker Machine & Foundry Co.
 Crompton & Knowles Loom Works
 Draper Corp.
 Easton & Burnham Machine Co.
 T. C. Entwistle Co.
 Saco-Lowell Shops
 Warp Conditioners—
 E. F. Houghton & Co.
 Warp Dressing—
 Arabol Mfg. Co.
 Arnold, Hoffman & Co., Inc.
 Bosson & Lane
 Hart Products Corp.
 E. F. Houghton & Co.
 Seydel Woolley Co.
 L. Sonneborn Sons, Inc.
 Chas. H. Stone
 Warp Sizing—
 Arabol Mfg. Co.
 Borne, Scrymser Co.
 E. F. Houghton & Co.
 Stein, Hall & Co.
 Chas. H. Stone
 Wolf, Jacques & Co.
 Warp Stop Motion—
 Draper Corp.
 R. I. Warp Stop Equipment Co.
 Warp Tying Machinery—
 Barber-Colman Co.
 Warper Shell—
 Cocker Machinery & Foundry Co.
 Warpers (Silk or Rayon)—
 Eastwood, Benj. Co.
 Sipp Machine Co.
 Washers (Fibre)—
 Rogers Fibre Co.
 Waste Reclaiming Machinery—
 Saco-Lowell Shops
 Whitin Machine Works
 Woosocket Machine & Press Co., Inc.
 Waste Presses—
 Economy Baler Co.
 Water Controlling Apparatus—
 Rodney Hunt Machine Co.
 Water Wheels—
 Allis-Chalmers Mfg. Co.
 Weighting Compounds—
 Arabol Mfg. Co.
 Bosson & Lane
 General Dyestuff Corp.
 Hart Products Corp.
 Marston, Jno. P. Co.
 Seydel Chemical Co.
 Seydel Woolley Co.
 L. Sonneborn Sons, Inc.
 Wolf, Jacques & Co.
 Welding Apparatus (Electric Arc)—
 Lincoln Electric Co.
 Well Drillers—
 Sydnor Pump & Well Co.
 Whizzers—
 Tolhurst Machine Works

Winders—
 Abbott Machine Co.
 Eastwood, Benj. Co.
 Foster Machine Co.
 Universal Winding Co.
 Winders (Skein)—
 Foster Machine Co.
 Sipp Machine Co.
 Windows—
 Carrier Engineering Corp.
 Parks-Cramer Co.
 Yarn Conditioning Machines—
 The Philadelphia Drying Machinery Co.
 C. G. Sargent's Sons Corp.
 Yardage Clocks—
 T. C. Entwistle Co.

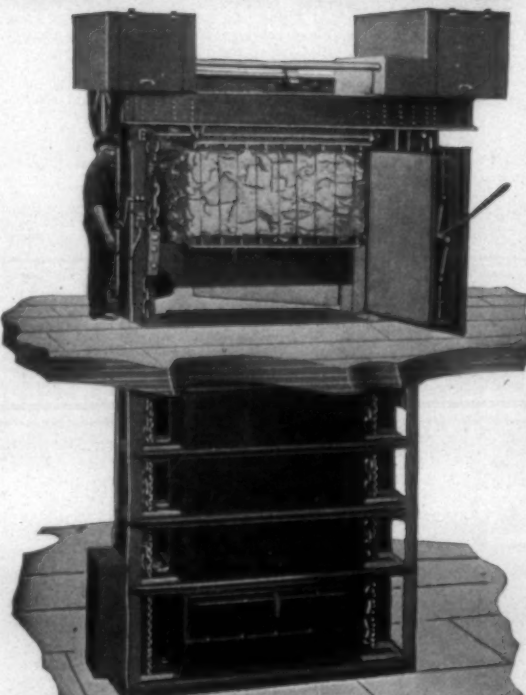
Saco-Lowell Shops
 Yarn Tension Device—
 Eclipse Textile Devices, Inc.
 Saco-Lowell Shops
 Yarn Presses—
 Dunning & Boschert Press Co., Inc.
 Economy Baler Co.
 Yarns (Cotton)—
 American Yarn and Processing Co.
 Mauney Steel Co.
 Yarns (Mercerized)—
 American Yarn and Processing Co.
 Mauney Steel Co.
 Yarn Testing Machines—
 Scott, Henry L. & Co.

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Presses for Waste, Cloth, Yarn, etc.

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EMMONS LOOM HARNESS COMPANY

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Loom Harness and Reeds

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Dixon's Patent Reversible and Locking in Back Saddle with New Oiling Device, three Saddles in one, also Dixon's Patent Round Head Stirrup.



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FIG. 27

LANE

Patent Steel Frame
Canvas Mill Trucks

Consider the economy of the Lane Canvas Truck, adapted as it is to withstand many years of service—because of the quality, strength and durability, which are built into it from the start.

W. T. Lane & Brothers

Originators and Manufacturers of
Canvas Baskets for 25 years

Poughkeepsie, N. Y.



Williams' Service on Heddle Frames

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new fabrics.

Hand-in-hand with this prompt service goes the best quality of lumber—(selected, air-dried), stronger ends—and facilities for making any kind of frame.

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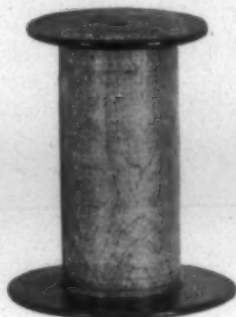
Millbury, Mass.

GEORGE F. BAHAN, Southern Representative
Box 581, Charlotte, N. C.

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Winds Cone Shaped Spools and Straight Spools.

With Cone Shaped Spool, yarn is drawn over small end of Spool.



Empty Spool

OTHER FEATURES.

1. Has the advantage of holding more yarn than any other spool of equal length.
2. This increased amount of yarn is a great advantage in both skein winding and making filling bobbins, as it saves changing bobbins and lessens the number of knots.
3. The lower head is much larger than the top head and silk will draw off over the top head to end of yarn.
4. Barrel of spool is straight, but finished package is cone shape.

MADE VARIOUS SIZES.

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Full Spool

Also Rayon Warpers (heavy type) various sizes

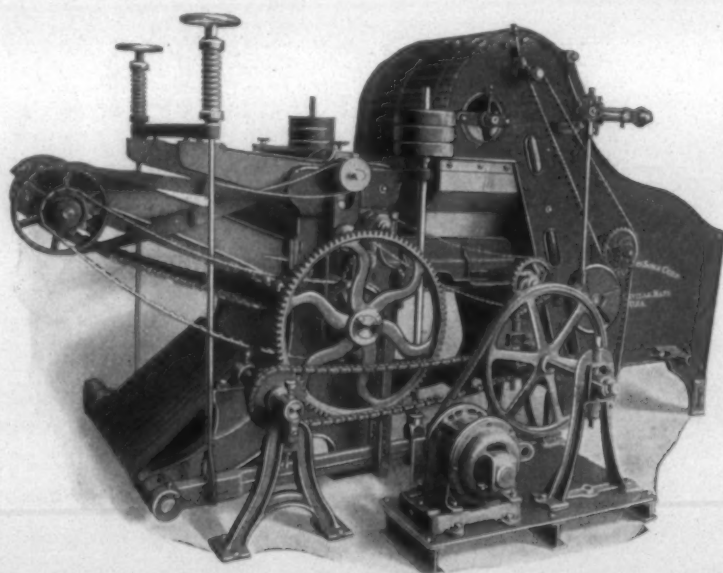
Southern Agent

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Continuous Automatic Extractor

This apparatus consists of a ruggedly mounted pair of 12" diameter compound lever weighted squeeze rolls, with adjustable feed and doffer aprons, to which bleach or dye liquor saturated cotton or wool is continuously delivered by an Automatic Feed and by which the maximum percentage of such contained liquid is squeezed from the fibres and runs to waste or is recovered as the situation demands.

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